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Beliefs and responses to hypertension : patients' and practitioners' perspectives.

Morgan, Myfanwy Ann

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**BELIEFS AND RESPONSES TO HYPERTENSION:
PATIENTS' AND PRACTITIONERS' PERSPECTIVES**

**Thesis
Presented for the
Degree
of
Doctor of Philosophy
in the Faculty of Medicine
by
MYFANWY ANN MORGAN**

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**Department of Public Health Medicine
United Medical and Dental Schools
St Thomas' Campus
University of London**



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ABSTRACT

The detection and treatment of essential hypertension (blood pressure) forms a major approach to the prevention of cardiovascular disease. This research examines the meanings of this condition among patients from different cultural backgrounds, and their responses in terms of whether they experience changes in their psychological state and behaviours and their use of the prescribed drugs and other remedies. It also elicits the personal beliefs and practices of individual general practitioners and examines their awareness of patients' explanatory models.

The research is informed by a phenomenological perspective and employs qualitative methods. Data was collected in semi-structured interviews with groups of White and Afro-Caribbean working class people treated for hypertension by general practices in inner London, White middle class patients from an affluent suburb, and general practitioners from inner city practices.

Hypertension caused some worry for most patients, mainly because of their increased risks of a stroke or heart attack. Large numbers also rested and relaxed their pace of life in response both to symptoms and the wider meanings of this condition, with these behaviours characterising all social groups. Concerns about the possible long-term harmful effects of the prescribed medication were however greatest for Afro-Caribbean patients who regularly 'left off' the drugs and frequently took herbal remedies, reflecting a continuation of traditional cultural patterns. There was also diversity among general practitioners in their diagnosis and management of hypertension and in the information conveyed to patients, and a complex interaction and overlap between lay and practitioners perspectives. The implications are considered for preventive strategies and individual patient care, and for a broader understanding of lay and professional belief systems.

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INTRODUCTION

Essential hypertension or what is commonly referred to as high blood pressure, is regarded from a professional medical perspective as an asymptomatic condition of unknown origin. Its significance lies purely in the relationship between blood pressure elevations and increased risks of cardiovascular diseases, particularly strokes and coronary heart disease, which form major causes of mortality. In England, 1991, coronary heart disease accounted for 26% of deaths and formed the largest single cause of death, with stroke ranking third and accounting for 12% of deaths as well as causing considerable disability (Secretary of State for Health, 1992).

Blood pressure may be lowered through various behavioural measures, such as reducing obesity and overweight, avoiding excessive alcohol consumption and high sodium intakes. These measures together with stopping smoking also exert some independent effect on mortality risks, especially from coronary heart disease. However the detection of high blood pressure and its long-term treatment with drug therapy forms the main medical approach to the prevention of cardiovascular conditions and comprises the most common indication in developed countries for the initiation of life-long drug therapy.

The numbers of people defined as having blood pressure levels requiring treatment ranges from about 5% to 20% of the population and depends on assessments of the benefits of blood pressure control on mortality risks, as weighed against the possible adverse social and psychological effects for patients of being diagnosed as hypertensive, the requirement to take tablets daily over many years and the possible clinical side-effects of treatment. An indication of the demands on doctors from hypertension is shown by figures for England and Wales, 1981-82, where it is estimated that uncomplicated hypertension accounted for 3.8%

of general practice consultations compared with 1.4% for asthma and 0.8% for diabetes mellitus (Royal College of General Practitioners, 1986).

The diagnosis and treatment of hypertension as a preventive strategy reflects the particular concerns and approach to health of professional western medicine, with its emphasis on 'disease', in terms of the identification and treatment of specific pathologies. In contrast, lay people are primarily concerned with 'illness', in terms of their subjective experience, explanations and responses to disvalued changes in states of being or social function. Thirdly there are a variety of non-professional specialists such as herbalists, homeopaths and acupuncturists, who comprise the folk sector and each have their own explanations of the causes of ill health and particular forms of diagnosis and treatment. At any one time there thus exists different forms of explanation of states of ill health, and hence of what are seen as appropriate behaviours and treatments. As Kleinman (1980) explains:

'Neither disease nor illness is a thing, an entity: instead there are different ways of explaining sickness, different conceptions of reality.' (p. 38)

The explanatory models that characterise the various health arenas although containing distinctive aspects, also partially overlap. Lay models are for example increasingly influenced by and reflect the dominant biomedical model, and doctors are often aware of lay beliefs and of the broader social and psychological meanings and consequences of ill health. However to the extent that professional and lay views diverge this may give rise to problems of doctor-patient communication, and what is judged from a professional medical perspective as patients' non-compliance and other inappropriate behaviours.

In terms of hypertension the behaviours of patients are regarded as departing from professional medical expectations in two main ways. Firstly, this condition is regarded from a medical perspective as purely an asymptomatic risk factor with no implications for an individual's immediate well-being. However research undertaken in North America

indicates that the diagnosis of high blood pressure may give rise to considerable psychological distress among lay people and occasionally to their adoption of a sick role, with these responses forming an important cost of the detection and control of high blood pressure (Macdonald et al, 1984). Secondly, whereas the medical profession expects people to comply and take their anti-hypertensive drugs regularly as prescribed, there is evidence of a high level of non-compliance among hypertensive patients, with many people dropping out of treatment altogether (Joint National Committee, 1988).

Patient's responses to hypertension thus have important implications for both blood pressure control as a preventive strategy and the effectiveness of treatment. However research has mainly focused on establishing statistical associations and the measurement of outcomes. Little is therefore known about patients' beliefs, concerns and expectations of this condition and its treatment or of their influence in guiding behaviours. Given that patients' explanatory models are culturally shaped and form part of a broader belief system it may also be expected that there will be variations between ethnic groups, to the extent that these comprise distinct sub cultures. As Saunders (1984) explains:

'Culture established guides for individuals which enable them to know when they or others may be regarded as ill; it discloses something about the causes and nature of particular episodes of ill health and what should be done about them; and it delimits the behaviour expected of individuals who are given the label 'ill' or 'sick'.

A primary focus of this research is thus to elicit the content of patients' beliefs and responses to hypertension in terms of the meanings of this diagnosis and its treatment, and in particular to examine the influence of ethnicity in shaping patients' explanatory models and behaviours. The study compares groups of White and Afro-Caribbean people who were being treated for hypertension by their general practitioner. The focus on Afro Caribbean people reflects the origins of the research in the concerns of a general practitioner colleague that he was not communicating effectively with his Afro-Caribbean hypertensive patients and wondered what they really believed about this condition and whether they took the

medication as prescribed. People of Afro-Caribbean origin also comprise the largest ethnic minority in the inner London borough of Lambeth which formed the setting for the study, and as a group they have a particularly high mortality rate from stroke. Current figures indicate that the mortality rate for stroke among Afro-Caribbean men in the UK is 76% higher than the average figure and over twice as high as the average for women (Chief Medical Officer, 1991). The initial groups of patients were confined to people in manual occupations which account for the majority of the population in Lambeth. However a further group of White middle class patients living in an affluent suburban area was subsequently studied to examine possible variations in beliefs and responses to hypertension associated with differences in their structural position and life circumstances.

The professional medical perspective, in contrast to the lay arena, is commonly regarded as encompassing a uniform and homogenous system of beliefs and practices, reflecting the influence of a common medical culture based on the biomedical model. However in reality this also includes differing perspectives, reflecting the process of diffusion and adoption of new scientific knowledge and the values and orientations of its various specialty groups and practitioners. For example, general practice is regarded as differing from hospital specialties in being more directly influenced by lay and folk concepts, and depends for its success on the doctor moving some distance toward the categories that are important to their patients (Helman, 1981). Despite this emphasis, problems of the 'gulf' or communication gap between general practitioners and patients are well documented (Tuckett et al, 1985). However, little is known about the precise nature of practitioners' explanatory models in relation to particular medical conditions or their awareness of patients' beliefs and concerns. This research therefore complements the study of patients' explanatory models by eliciting general practitioners' personal beliefs and management of hypertension. It also examines the extent to which general practitioners are aware of even if not personally endorsing patients' beliefs and practices, thus providing an indication of the extent of the communication gap between patients and their doctors.

Chapter 1 provides a background to the research by examining the concept of hypertension as a clinical category. It first traces the emergence of essential hypertension as a clinical category and examines the factors that contribute to the 'medicalisation' of blood pressures. It then describes the continuing clinical uncertainties and the social evaluations that surround this condition and which give rise to variations in policies and practices. Chapter 2 focuses on the lay perspective and provides a critical review of the literature relating to two aspects of patients' responses that depart from medical expectations, namely the psychological and behavioural impact of being 'labelled' and treated for hypertension and the level and causes of non-adherence with antihypertensive treatment. Chapter 3 describes the general research approach and the series of studies of hypertensive patients and their general practitioners. Chapters 4-6 present their findings. The final chapter considers the contributions of these studies to a broader understanding of lay cultures and responses to medical diagnoses and treatments and examines the interaction and overlap between patients' and practitioners' perspectives. It also assesses the implications of the findings for control of high blood pressure as a preventive strategy and the provision of individual patient care.

Chapter 1

HYPERTENSION AS A CLINICAL CATEGORY

This chapter first traces the emergence and development of hypertension as a clinical category associated with the growth of biomedicine. It then considers the social evaluations and assumptions underlying the definition of particular blood pressure levels as undesirable and requiring treatment, and draws attention to the differences between a community and individual perspective in assessing the benefits of treatment on cardiovascular risks. This is shown to contribute to variations in formal policies and professional statements regarding the management of 'mild' hypertension, with implications for the numbers of people diagnosed and treated for this condition.

Development as a clinical category

Blood pressure was not measured clinically until this century, although the hardness of the arterial pulse has formed a vital sign and symptom of underlying disorders since ancient times. As early as 2600 BC the Yellow Emperor's Classic of Internal Medicine stated:

'Nothing surpasses the examination of the pulse for with it errors cannot be committed. In order to examine whether Yin or Yang predominates, one must distinguish a gentle pulse and one of low tension from a hard and bounding pulse. The heart influences the force and fills the pulse with blood'.

It went on to link high blood pressure and congestive heart failure by stating that, 'when the pulse is abundant but tense and hard like a cord there are dropsical swellings'. (Ruskin, 1956)

Remedies for hard pulse in the ancient world were venesection and the use of leeches to reduce the volume of blood, with acupuncture practised in China. The modern concept of

hypertension although having its origins in the ancient world was shaped by the growth of modern scientific medicine which sought to locate the causes of disease in terms of specific pathologies within the body. Central to this approach was the greater understanding of physiology that occurred in the early nineteenth century and the developments in methods of investigation and detection of pathologies. Of particular importance to the concern with abnormal blood pressure was the increased understanding of the functions of the heart and arteries, and especially the work of Richard Bright, who in 1836 brought together various earlier observations to describe the links between the fullness and hardening of the pulse with dropsy and hardening of the kidneys. However widespread interest in and application of the concept of high blood pressure depended on the development of non-invasive methods for its accurate measurement. In 1886 Riva-Rocci produced his indirect mercury sphygmomanometer with a wrap-around inflatable rubber cuff, and recorded the systolic blood pressure using the first pressure that he could palpate as the cuff was shortly deflated. This was followed in 1905 by a major breakthrough by Korotkoff who described the sounds heard with a stethoscope placed over the brachial artery below the inflated cuff during its slow deflation. The systolic blood pressure which measures the maximal pressure generated by cardiac contraction was taken as the point at which the sounds that are obliterated with the inflation of the cuff are heard to return as the cuff deflates. The diastolic blood pressure which identifies the relaxation of the pressure was taken as the point when the sounds suddenly become muffled (phase 4) or later disappear (phase 5).

This major development in the techniques and instruments for the measurement of blood pressure was accompanied by greater attention to blood pressure as a clinical sign. The initial preoccupation was however with severe and malignant blood pressure as a disease. The medical profession thus used blood pressure measurement as a signal to look for heart damage, retinal signs, renal impairment and albuminuria. For such patients the prognosis was poor. These concerns led to the institution of blood pressure measurement as an established part of medical and life insurance examinations.

High blood pressure associated with heart failure, organ damage or renal disease which formed the initial preoccupation has come to be termed secondary hypertension. This is now fairly rare and is distinguished from primary or essential hypertension which currently accounts for over 95% of cases of hypertension. Essential hypertension refers to a situation in which high blood pressure merely forms a risk factor increasing probabilities of a stroke or heart disease through damage caused to the heart or arterial wall, rather than a disease in itself. Of importance in the development of the concept of essential hypertension as a risk factor was the observation first stated by Mahomed in 1874 that hypertension could occur without primary renal disease and that in most patients the increase of arterial pressure precedes any symptoms of renal disease. However it was the physician, Sir Clifford Allbut who was primarily responsible for popularising the concept of hypertensive disease developing in the absence of renal disease (Freis, 1990). The 'disease' was finally named by Frank in German in 1925 (Frank, 1925). He called it 'hypertonie essential', which might be freely translated as 'primary hypertension'. Apparently many physicians interpreted this to mean that hypertension was an essential adaptive reaction, which led to the rather confusing term 'essential hypertension'.

Three developments appear to have been important in the widespread application of the concept of hypertension as a cardiovascular risk factor, rather than a disease with a morbidity of its own. One was the developments in drug therapy that occurred from the late 1950s. During the early years of this century the main approach to reducing blood pressure was through low salt diets, although surgery on the sympathetic nervous system was also occasionally employed. Effective anti-hypertensive drugs became available in the 1940s. However at first these carried such severe side effects that they were only used in the most serious cases of hypertension. Freis (1990) describes the greatest breakthrough in the history of the drug treatment of hypertension as occurring with the discovery of the orally effective diuretic chlorothiazide in the 1950s. This drug was effective in reducing blood pressure when used alone and was much more acceptable to patients than a strict low-

salt diet. It also had the advantages of enhancing the anti-hypertensive activity of other drugs. This permitted smaller and less toxic doses of other drugs to be used and enabled effective blood pressure control to be achieved in most patients with greatly reduced side-effects. Subsequent developments in drug therapy have been the introduction of beta blockers whose effectiveness was first demonstrated in the late 1960s and the more recent introduction of calcium channel blockers and ACE inhibitors.

A second major development contributing to the widespread adoption of essential hypertension as a condition requiring treatment was the accumulating evidence of the role of blood pressure as a risk factor in cardiovascular disease. This was provided by clinical case history studies, life insurance company statistics concerning the natural history of hypertension, and early epidemiological community studies. The latter received an impetus from Pickering's (1955) claim that hypertension was not a qualitatively distinct condition but rather the upper end of the population distribution of blood pressures, thus focusing attention on the community.

Particularly notable as an early epidemiological study is what is often referred to as the Framingham study which began in 1952 and was based on a small self-contained community near Boston from which it derived its name (Dawber, 1980). This major community survey involved the follow-up of adults with no evidence of cardiovascular disease at entry over a period of 24 years, with the aim to evaluate the importance of a number of human characteristics measurable long before any disease was apparent to the eventual development of coronary heart disease. Stroke was subsequently also included as an endpoint. Examination of the relationship between blood pressure level and the development of coronary heart disease was first possible after 4 years follow-up and demonstrated a steady increase in rates of coronary heart disease as blood pressure increased (Dawber et al, 1957). Subsequent data with greater lengths of follow-up confirmed this relationship and showed increasing risks of both coronary heart disease and stroke (Dawber, 1980). These findings were regarded as requiring a new approach based on

the use of drug therapy to prevent the occurrence of cardiovascular conditions, rather than the occurrence of stroke, coronary heart disease, congestive heart failure and peripheral vascular disease forming the starting point of treatment (Gordon and Kannel, 1972).

At the same time as data was accumulating regarding the association between blood pressure and risks of cardiovascular disease, early clinical trials were demonstrating the beneficial effects of controlling blood pressure in reducing death rates and rates of cardiovascular events. A notable early study was undertaken by Hamilton, Thompson and Wisniewski (1964) in the UK. This involved a trial based on 61 subjects aged under 60 years with no symptoms of arterial disease who had maintained a diastolic blood pressure of at least 110mm Hg over a three month period. It showed that for those with a diastolic blood pressure of over 110mm Hg the use of drug therapy affords a significant reduction in risks of a stroke and other complications. The findings of this pioneer study were reinforced by the result of the first phase of the US Veterans Administration trial (Veterans Administration, 1967). This began in 1964, based on men aged 30-73 years with a diastolic blood pressure in the range 115-119mm Hg. This phase of the trial was stopped after three years because of the higher rates of deaths and complications in the untreated controls. In presenting their findings the research group stated:

'.... the presented report leaves little doubt as to the value of antihypertensive drug therapy in essential hypertension associated with clinical diastolic blood pressures of 115mm Hg or more.' (Veterans Administration, 1967, p.121)

The late 1960's thus saw the beginning of the widespread use of drug therapy to 'treat' essential hypertension, and thus with a shift of concern from hypertension (secondary) as a disease, to hypertension (primary or essential) as a risk factor. This was further encouraged by the availability of new more effective drugs with fewer adverse effects and what was increasingly seen as the new public health problem of the predominance of non-infectious conditions, and particularly cardiovascular diseases and concerns. This partly

reflected the decline of respiratory tuberculosis and other infectious diseases since the 1930's and greater numbers surviving to older ages, as well as the effects of diets rich in fats, high levels of smoking and other factors contributing to non-infectious diseases (McKeown, 1976). It is also possible that the recorded increase in deaths from coronary heart disease and other non-infectious conditions may be partly an artefact or social product arising from new methods of classification (Bartley, 1985). However whatever the explanations for the new concerns with cardiovascular diseases as major causes of death, this recognition of the changed pattern of disease was associated with an increasing emphasis on the need for preventive measures, especially given the limited effectiveness of curative measures in reducing mortality from these conditions.

The development of high blood pressure as a clinical category and the emphasis given to its detection and treatment through drug therapy can thus be viewed as representing the logical progression of increasing knowledge of the risks of high blood pressure, improvements in measurement techniques, more effective drugs causing fewer adverse effects, and the increasing perception of the 'problem' of cardiovascular diseases as a major cause of ill health. However this history and emphasis can also be viewed from a social constructionist perspective as representing the dominance of biomedicine within the professional arena, and hence what Foucault (1973) describes as a particular 'clinical gaze' or way of seeing the nature and causes of ill health. This in turn gives rise to certain types of information and forms of categorization, and influences approaches to the restoration of normality in structure or function and the prevention of disease. In this way medicine like other forms of knowledge can be regarded as inherently social, while disease categories form the product of the dominant mode of thinking in society, rather than defined by reference to universal, culture-free criteria. The development of biomedicine is regarded as reflecting the growth of rationalism in eighteenth century society and the place accorded to scientific knowledge and processes in discovering the truth. The continuing dominance of this approach to health is attributed to the pre-eminent position assigned to scientific knowledge and the vested interests of particular groups, including those of the medical

profession. Writers adopting a political economy perspective also regard the biomedical model with its emphasis on identifying and treating specific pathologies and hence on individual interventions, as compatible with and sustaining wider power relations by diverting attention from the social and economic organisation of society as a cause of ill health (Waitzkin, 1979; Navarro, 1986).

In terms of current thinking, the continuing high rates of heart disease and stroke are regarded as major public health problems, for although both conditions have shown some reduction in most countries since the late 1960's or early 1970's, they still form major causes of mortality. For example, in England, 1991, coronary heart disease accounted for 26% of deaths and formed the largest single cause. Cerebrovascular disease ranked third accounting for 12% of deaths and is associated with considerable disability with a 40% survival rate in the first year (Secretary of State for Health, 1992; Ebrahim, 1990). Strokes are mainly caused through the effects of high blood pressure in producing a cerebral haemorrhage or atheroma in the carotid artery. Coronary heart disease mainly results from atheroma in the coronary arteries but sometimes occurs as a result of the effects of pressure on the heart in causing damage to the heart muscles. Other organs that may be adversely affected by raised blood pressure are the retina and kidneys.

Blood pressure is regarded as a major risk factor for both stroke and coronary heart disease. Two other classical risk factors for coronary heart disease are cigarette smoking and high blood cholesterol, while other risk factors for both conditions include obesity, diabetes, heavy alcohol consumption and lack of physical exercise (Table 1). There is some evidence that when these risk factors are combined there is a substantial increase in risk (Shaper et al, 1986; Ebrahim, 1990).

One approach to the prevention of cardiovascular disease is to focus on at-risk groups. This is sometimes termed the 'medical model' in view of its individualistic emphasis, and involves the detection of at risk individuals through community screening or opportunistic

case finding when people present for medical consultations or general health checks. Those identified as at risk are then given life style advice regarding diet, smoking, weight, etc. and/or drugs to control their blood pressure. The alternative approach is the community approach which focuses on reducing risk factors in the population as a whole, and is appropriate when a risk factor is so common that most people could benefit from a reduction. An early example of a population programme designed to reduce cardiovascular risks was carried out in North Karelia, Finland, between 1972 and 1977. This programme aimed to influence smoking behaviour, dietary behaviour and blood pressure levels, through education, screening for hypertension and various environmental interventions, such as smoking restrictions, the promotion of sales of healthy food in shops, and negotiations with the dairy and meat industries to encourage development of lower fat products (Wagner, 1982; Salonen et al, 1986). Since the North Karelia study there have been several other community based programmes, with current programmes including the Look After Your Heart programme in England and Heart Beat Wales which involve both educational and broader health measures (see review in Waller and Morgan, 1987). However as Calnan (1991) observes, government policy in relation to the control of smoking, diet, alcohol and the encouragement of exercise has traditionally been characterised by a non-interventionist approach, with the emphasis on persuasion, industrial self-regulation, and local measures.

The Health of the Nation White Paper (Secretary of State, 1992) identifies the prevention of coronary heart disease and stroke as key targets. The roles of various agencies, including local authorities, health authorities, voluntary bodies, industry and the Health Education authority, in promoting healthy life styles are considered in the Key Area Handbook on these conditions (Secretary of State for Health, 1993). This document also assigns considerable importance to primary care. General practices will have the option to participate in systematic programmes of health promotion relating to smoking, coronary heart disease and stroke, including blood pressure and cholesterol checks and life style advice. The recent requirements for general health checks also provides increased

opportunity at a primary care level for identifying and treating at-risk individuals and is likely to lead to higher rates of detection and treatment of elevated blood pressures.

Diagnosing hypertension

The diagnosis of hypertension is now widely applied to people with pressures at the upper end of the distribution and carries important consequences for individuals transferred from the category of 'healthy' to 'at risk' (or even 'sick'). However despite the implications of this medical label, the definition of blood pressures as undesirable and requiring intervention is fairly arbitrary. This partly reflects the distribution of blood pressures. Whereas Platt (1961) believed that there exists a population sub-group which is genetically susceptible to hypertension in middle age and a separate group not so susceptible, it now appears that blood pressures are normally distributed in the community, with this normal distribution characterising both sexes and all ages. As Pickering's group observed:

'... what has been called hypertension is a purely arbitrary segregation of those having high arterial pressures in the higher ranges and having no disease to which these pressures can be attributed.' (Hamilton, Pickering et al, 1954)

The designation of 'high' blood pressure thus requires imposing a cut-off point on a continuous distribution and imposing a quality (acceptable/unacceptable) on a quantity in the absence of a firm biologic base. Furthermore the relationship between blood pressure elevations and risks of cardiovascular disease is linear. All elevations in pressure are thus associated with increased risks of cardiovascular events, with some upturn in risk at a diastolic pressure exceeding 85mm Hg (Kannel, 1991). There is therefore no point at which there is a significant increase in risk. The designation of essential hypertension and the subcategories of mild, moderate and severe hypertension, thus involves imposing discrete categories on a continuous distribution and graded risk factor. The lack of a firm biologic base for designating the normal from the pathological is not unique to blood pressure but

also characterises many other medical categories. Common examples include definitions of diabetes, blindness and senile dementia, which all require that a discrete categorisation is placed on a continuous variable and a quantity treated as a quality. However Rose (1992) suggests that in most instances nature presents us with a process or continuum and not a dichotomy, with the few exceptions being largely confined to a handful of congenital disorders. The point on the distribution which is adopted to define abnormality therefore generally reflects evaluations of the various benefits, risks and costs of treatment, and may vary over time and among different groups within the professional arena. In terms of hypertension, the debate centres on the appropriateness of drug treatment for 'mild' hypertesion which refers to diastolic pressures of from 90 or 95mm Hg up to about 100 or 105mm Hg. This blood pressure range accounts for greater numbers of people than the higher ranges of moderate and severe hypertension but carries lower individual risks. As shown later in this chapter, policies and practices regarding the treatment of mild hypertension have varied over time and between countries, largely reflecting differences in evaluations of the costs and benefits of treatment at this blood pressure range.

Although there is a tendency to impose categories on blood pressure levels, in reality there are difficulties in assigning a precise value to an individual's blood pressure. This arises because blood pressure is not a stable characteristic, such as height, but is subject to considerable diurnal and minute-to-minute fluctuations. Peaks occur with feelings of anxiety, emotion, pain and isometric exercise, and troughs with relaxation, sleep and rest. Blood pressure is also affected by posture, the ambient temperature and other circumstances at the time of measurement, including the setting and characteristics of the observer, with blood pressure often being higher in a doctor's surgery than in home surrounding (Pedoe, 1989). In view of this variability it is recommended that a person's pressure is recorded after five minutes rest, with the arm supported, and preferably with no food, smoking, pain or exercise within the previous half-hour. With adherence to these requirements and the reduction of errors of measurement through the training and testing of observers, the regular checking of the sphygamamometer, and the use of a type designed to ensure the observers'

readings are made 'blind' or using an electronic recording machine, it is generally accepted that the blood pressure distribution of the population can be characterised accurately by a single reading taken from an appropriately sized random sample of the population (Rose et al, 1964). It is less easy to characterise the blood pressure of individuals by a single reading, as this is merely a sample of their personal range and may lead to an inaccurate estimate of their place in the distribution, given that the within subject variation is as much as 30mm Hg diastolic (Sleight, 1990). Clinicians are therefore encouraged to employ three readings obtained on separate occasions spread over several weeks before putting a person on drug therapy, unless the earlier readings dictate immediate treatment. It is also recommended that the diastolic pressure recorded should be the phase 5 reading, although individual clinicians have been shown to vary in how blood pressures are recorded, including whether phase 4 or 5 is taken as the diastolic pressure (Wilkinson et al, 1991).

The checking of blood pressure is now fairly routine, with the aim of identifying elevated pressures and prescribing drug treatment and/or dietary and life style advice for those regarded as having unacceptably high pressures putting them at increased risk of cardiovascular disease. In the UK and North America only the upper end of the blood pressure distribution is currently 'medicalised' and regarded as requiring treatment if pressures exceed a specified level. In contrast, up to the 1940's the medical literature rarely mentioned high blood pressure (essential hypertension) but instead identified low blood pressure as a disorder giving rise to lassitude and ready fatigability associated with a low level of metabolic processes. People were thus regarded as benefitting from treatment to increase their blood pressure (Dally, 1928). Following Robinson's definitive article published in 1940 in which he vehemently attacked those who regarded low blood pressure as pathological, this came to be accepted as a non-disease in the UK, as it did in the US and Canada who followed the British model (Robinson, 1940). In Germany, by comparison, this is still a formal diagnosis and consultations for low blood pressure are around 163 per million, while in a recent Rote Liste, the German catalogue of available prescribed drugs, no fewer than 85 drugs were listed for the treatment of low blood pressure (Payer, 1989).

Such variations thus underline the inherently social nature of diagnostic categories and the definition of conditions as undesirable and requiring medical treatment.

Causes of hypertension

In physiological terms blood pressure refers to the pressure produced by the action of the pumping heart against the resistance of the wall of the artery. Essential hypertension or high blood pressure that is not associated with any underlying disease is thought to occur as a result of the effects of an increased heart output or the narrowing of arteries causing increased peripheral resistance. However although these processes tend to produce increased pressures with age in western individual countries, there is considerable variability; some individual's experience a relatively rapid rise in blood pressure with increased age, between 5% and 25% of people show little or no increase, and the majority show a moderate increase. Some communities in Brazil, Thailand, Ethiopia, Uganda and other developing countries also show little age effects and their overall population blood pressure distribution is relatively low (Epstein and Eckoff, 1967).

The causes of individual variations in blood pressure and the variations within and between countries are still unclear, despite large numbers of both experimental and descriptive studies. Clinical textbooks sometimes summarise the position by stating that the causes of essential hypertension are not known. Others provide a more detailed review of possible risk factors, although often differing in some of the factors they include or in their emphasis. Cecil's Essentials of Medicine states:

'Many factors affect the risk of developing hypertension in an individual patient. The incidence of disease increases with age. Hereditary plays a strong role, with approximately 80% of hypertensive patients displaying a positive family history. Obesity and dietary intake of sodium are the two other variables that increase the risk of hypertension in susceptible individuals'. (p. 203) (Andreoli et al, 1990)

Another leading textbook gives a slightly different listing, which includes alcohol consumption and urban living and gives less emphasis to salt:

'The cause by definition is unknown, but evidence points to an interaction between hereditary and environmental factors ... Environmental factors that have been associated with hypertension include obesity, alcohol consumption and urban living. The role (if any) of a high salt intake has yet to be defined.' (p. 65) (Rees and Troughton, 1988)

As these two textbooks indicate, the two factors that appear from the scientific literature to most strongly influence blood pressure levels are genetic inheritance and obesity. In terms of genetic inheritance, early work showed that a high proportion of the relatives of patients with high blood pressure had a family history of excessive deaths due to heart disease or stroke, compared with an age, sex matched group of normotensive individuals (Weitz, 1923). Other studies have shown that the blood pressure of siblings tends to resemble each other to a greater extent than children resemble their parents, and that the familial resemblance of blood pressures begins early in childhood (Holland and Beresford, 1975). The question of whether this is due to genetic factors or to the influence of the family environment on diet, weight, etc. has been examined by studies comparing adoptive and natural children and through twin studies (Miall, 1971; Bianchi et al, 1979). It has been estimated from the results of such studies that approximately 60-70% of familial aggregation is ultimately due to genetic factors, although the genetic-hereditary component may account for only about 30% of the population variability in blood pressure (Hart, 1987).

There is also general agreement of the importance of body weight, with elevated pressures occurring more frequently in overweight than in underweight people (Wadsworth et al, 1985; Jarrett, 1986). This may also form a partial explanation of the rise in blood pressure with age and the differences in blood pressure distributions between geographic areas (Epstein and Eckoff, 1967; Beaglehole et al, 1978). It is generally estimated that among

overweight people a loss of 5kg body weight will produce a 10/5 mmHg reduction in blood pressure (Truswell, 1985).

Dietary patterns have been linked with elevated pressures and especially high levels of alcohol intake (McMahon, 1987), high levels of sodium (salt) intake (Simpson, 1985), and low levels of potassium intake (Langford, 1983). However there are still questions of their individual contributions to elevated pressures and the precise mechanisms by which they influence blood pressure. Establishing a relationship between any individual dietary constituent and blood pressure is difficult. This is partly because of the problems of obtaining accurate dietary histories, and also of allowing for the effects of confounding factors which may have a stronger relationship with blood pressure than the dietary factor under consideration, with both factors posing particular difficulties for cross-cultural comparative studies. In terms of salt intake there are also questions of whether there is a critical level, or a critical period during which sodium overload has a lasting effect. However although dietary intakes are regarded as influencing blood pressure levels, their greatest significance lies in their independent contribution to risks of stroke and coronary heart disease (Table 1).

Psychosocial factors although rarely mentioned in clinical texts, form a further possible cause of high blood pressure. Pain, anger, curiosity, fear, excitement and embarrassment all cause a transient rise in blood pressure in everyone. However stress theories suggest that sustained repetition of these feelings are a cause of sustained high blood pressure, due possibly to their effects on aldosterone secretion and sodium retention (Marmot, 1985).

Some support for a stress model has been provided by studies of reactions of stressful situations. These include data derived from a series of experiments with a mouse colony (Henry and Stephens, 1977) and reports of high blood pressure among people working in stressful conditions (Jonsson and Hansson, 1977) and those who become unemployed (Kasl and Cobb, 1970). However, although there is some suggestion that a stressful environment

may produce a raised blood pressure, as Marmot (1985) notes in his comprehensive review of the field, there are surprisingly few reports of a stress-blood pressure link. This may however reflect the problems in defining and measuring stress rather than the absence of such a link.

Another major psychosocial explanation focuses on the influence of personality or particular psychological traits. As early as 1919, practitioners began reporting distinct personality styles that were purportedly associated with hypertension, and beginning in the 1930's research attempting to tie emotional factors to hypertensive illness became somewhat more systematic. A general problem is that the particular personality characteristics ascribed to hypertensives, in terms for example of neurotic symptoms, depression, and a diminished sense of social and physical well-being, may be a product of patients' awareness of their diagnostic status and hence of the 'labelling' effect rather than a cause of high blood pressure. However, Somers-Flanagan and Greenberg (1989) in a recent review of research identified 48 studies they regarded as methodologically sound which linked hypertension with various personality traits, in terms of anger/hostility, communication/contact, and denial of negative affect/neurotic conflicts. Their conclusion was that these studies provide strong evidence that a link between psychosocial variables and hypertension exists.

Other evidence of the influence of psychosocial factors is provided by behavioural intervention studies designed to reduce blood pressure. One of the most methodologically sound was conducted by Patel et al (1981) and involved the random allocation to an intervention or control group of subjects who had at least two coronary risk factors (BP \geq 140/90mm Hg, plasma cholesterol \geq 6.3 mmol/liter, cigarette consumption \geq 10/day) but who were not taking anti-hypertensive medication. The intervention group were taught a technique of relaxation aided by biofeedback and instructed how to apply it to combat sources of stress in their everyday lives. At eight weeks after entry into the trial and again after eight months, blood pressures were significantly lower in the intervention than in the

control group. After four years, blood pressures showed a U-shaped trend in both groups but remained lower than the initial examination in the relaxation group (Patel et al, 1985). These results provide important support for non-pharmacological interventions, although as the researchers acknowledge, it is possible that a behavioural intervention may lower blood pressure as a therapeutic effect without behavioural factors having been responsible for the initial elevation. More generally there are questions of whether there is a direct link between psychosocial factors and sustained elevations in blood pressure, or whether the main contribution of psychosocial factors is to increase individuals' general susceptibility or vulnerability, with the result that they are more likely to develop elevations in blood pressure if they experience other risk factors (Najman, 1980).

The question of causes of essential hypertension is thus surrounded by continuing uncertainties in the scientific literature. It is now postulated that in contrast to the search for single causes, essential hypertension should probably be regarded as a heterogeneous syndrome with multiple environmental factors acting on a polygenically inherited susceptibility to produce hypertension. This may be mediated by cell wall abnormalities and defects in sodium and/or calcium transport (Hickey and Graham, 1988).

Blood pressure control as a preventive strategy

Blood pressure is regarded as the main classical risk factor in relation to stroke, and one of three classical risk factors together with cigarette smoking and high blood cholesterol which exert significant independent effects on risks of coronary heart disease (Table 1). Considerable emphasis is therefore given to lowering blood pressure, with the main approach being through the detection and treatment of elevated pressures. However the justification for detection and treatment requires to be based on overwhelming evidence of benefits, given that hypertension is an asymptomatic condition and its treatment carries possible personal costs for patients (Holland and Stewart, 1990).

The medicalisation of blood pressure and its control through drug therapy is regarded as having various costs to individuals, or what Illich (1976) terms iatrogenic effects at both a social and clinical level. The social and psychological costs of being 'labelled' and treated for high blood pressure have been documented by a number of trials and community studies. They suggest that this diagnosis is often associated with reduced feelings of psychological well-being and may have effects on behaviours, including possibly the adoption of a sick role (see Chapter 2). Less attention has been paid to the prevalence of clinical iatrogenesis in terms of the experience of drug side-effects. However most of the anti-hypertensive drugs prescribed are known to carry risks of side-effects, including lethargy, depression, impotence, nausea, dizziness and headaches. Information is also available on side effects from a small number of trials, including the Medical Research Council trial of mild hypertension which found that over the 5 year study period, 10% of patients withdrew from the trial due to adverse side effects (MRC Working Party, 1985). A multicentre, randomised double blind study of 6 months duration to determine the effects on quality of life of three hypertensive drugs found that 52% of patients in the cilazapril group reported one or more adverse events during the study, compared with 62% in the atenolol group and 64% in the nifedipine R group. An adverse event was cited as the reason for early discontinuation of therapy for 5% patients in the cilazapril group, and 8% and 17% respectively in the atenolol and nifedipine groups. Cough and sore throat were most common in the cilazapril group, fatigue and cold hands and feet in the atenolol group, and edema and flushing in the nifedipine R group (Fletcher et al, 1992). These three classes of fairly new anti-hypertensive drugs were thus associated with a large number of symptomatic complaints, especially among the nifedipine R group.

The benefits of drug treatment on cardiovascular risk are generally regarded as proven for middle aged people with moderate to severe hypertension based on the first of the Veterans Administration trial (1967) and other trials undertaken in the 1960's and 1970's, which all showed substantial reductions in cardiovascular events for the treated group. However the increasing treatment at lower blood pressure levels led to the setting up of

major trials of treatment for 'mild' hypertension. Their results provide a much less clear case for treatment, especially when the benefits in risk reduction are considered in terms of the costs to individuals.

An early trial examining the benefits conferred by treatment at lower blood pressure levels was the second phase of the Veterans Administration (1970) study based on men with a diastolic pressure of 90-114mm Hg. This trial continued for five years and showed benefits of treatment only for pressures of 105mm Hg diastolic and over, which is now generally regarded as the upper end of the category of mild hypertension and within the band of moderate hypertension. Subsequently there have been four major trials of mild hypertension. Their design and findings are briefly summarised in Table 2. The first of these which reported in 1976 was the US Public Health Services Hospitals Co-operative Group which followed 389 men and women with mild hypertension (diastolic 90-104mm Hg at entry) randomly allocated to treatment and control for an average of seven years. This showed small benefits for cerebrovascular disease but not for coronary artery disease (Smith, 1977). This was followed by the Oslo study (Helgeland, 1980), the Australian National Blood Pressure Study (Management Committee, 1980), and most recently by the large British Medical Research Council trial which recruited 17,354 patients with diastolic blood pressures at entry of 90-109mm Hg and accrued 85,572 patient years of observation (MRC Working Party, 1985).

These four trials of 'mild' hypertension have involved different control groups, treatment regimes, ages, follow-up periods, and drop out rates. Nevertheless they show similar patterns. In all trials, treatment is demonstrated to provide benefits on cerebrovascular events (Table 2). For example, the MRC trial showed that 60 strokes occurred in the treatment group and 109 in the placebo group, giving rates of 1.4 and 2.6 per 1000 patient years of observation. In contrast, the trials of mild hypertension generally show no gains in terms of coronary events. In the MRC trial 222 coronary events occurred on active treatment and 234 in the placebo group (5.2 and 5.5 per 1000 patient years respectively). Overall the

incidence of all cardiovascular events in the MRC trial was reduced on active treatment, whereas mortality rates from cardiovascular events was not affected by treatment (although active treatment was associated with a beneficial effect for men). Furthermore the risks of smoking was shown to far outweigh the benefits of treatment. These findings of the MRC trial of mild hypertension among middle aged people have formed an important influence in raising thresholds for intervention in the UK and encouraging greater attention to non-pharmacological approaches to the prevention of coronary heart disease, since it provides evidence of fairly limited benefits of treatment on cerebrovascular events and almost no effect on coronary artery events (Breckenridge, 1985; Swale et al, 1989).

Compared with younger age groups there has traditionally been greater reluctance to manage hypertension in elderly people with drug therapy as they are at greater risk of side effects. However a number of trials of drug therapy in the management of hypertension among elderly people have now been undertaken (see O'Malley and O'Brien, 1992; MRC Working Party, 1992). Overall these trials provide evidence of the benefits of treatment on cardiovascular morbidity and mortality among this age group, particularly the incidence of fatal and non-fatal strokes. However these benefits, as with the trials of mild hypertension among young and middle aged adults, have to be balanced against the costs to patients of being diagnosed as hypertensive and required to take drugs daily, as well as questions of the opportunity costs of the resources devoted to hypertension detection and treatment. Despite the relatively conservative approach to hypertension adopted in the UK, this condition absorbs substantial resources in terms both of general practitioners' time and pharmaceutical costs. In the UK, 1987, the net ingredient cost for anti-hypertensive drugs was £100.6 mil (Marley et al, 1991), and over 50 generic drugs are listed in the British National Formulary approved for use as anti-hypertensive agents (Hart, 1987). The potential resource costs of a more rigorous approach to hypertension detection and treatment is therefore enormous, especially given that probably up to 20% of the population are in the category of 'mild' hypertension.

The benefits of treating people with mild hypertension with long term drug therapy, depends on whether this is approached from an individual or a population perspective. Individuals with mild hypertension are at relatively low personal risk of a cardiovascular event. For example, the MRC trial showed that 95% of control patients remained free of any cardiovascular event over the five year period. This low level of risk meant that it was necessary to treat 850 mildly hypertensive patients with anti-hypertensive drugs for five years to prevent about five strokes. Thus for the substantial majority of people with mild hypertension their treatment will be of no benefit. However, although the risks of cardiovascular disease and benefits of drug therapy to lower their blood pressure are small for individuals at levels of mild hypertension, a large proportion of all deaths from cardiovascular events occur among the many people with mild hypertension who are at relatively low personal risk. This is illustrated by data from the Whitehall study of 20,000 middle aged civil servants in London, which indicated that two-thirds of the coronary deaths and three-quarters of the deaths from stroke occurred among men with diastolic pressures below 110mm Hg, reflecting the large numbers of people with pressures below this level (Rose, 1981). Achieving a substantial decline in cardiovascular events thus requires reducing risks among people with only mild elevations in blood pressure. This contrast between the individual and population perspective is frequently referred to as the 'prevention paradox'. As Rose (1981) explains:

'The mass approach is inherently the only ultimate answer to the problems of a mass disease. But, however much it may offer the community as a whole it offers little to each participating individual' (p. 1850)

The contrast between individual and population benefit holds true for a variety of preventive measures, including mass immunisations, the mass wearing of seat belts and mass dietary change. However when a mass preventive strategy rather than removing a supposed cause of disease involves adding some unnatural factor in the hope of conferring protection, as with long-term drug therapy, it becomes particularly important to ensure a

high level of safety and to take account of the various social and personal costs involved. These considerations underlie the emphasis on reducing cardiovascular risks in the community by promoting a healthy life style through education, legislative changes, changes in food processing and other social and environmental measures, and the concerns about the medicalisation and treatment of blood pressures, especially at levels of mild hypertension.

Current professional knowledge and evaluations of the risks and benefits of drug therapy and recommended practice are contained in various consensus statements and guidelines for the treatment of hypertension. In general, a more aggressive approach has been taken in the US compared with the UK. The US Joint National Committee on Detection, Evaluation and Treatment of High Blood Pressure in its 1984 consensus statement recommended treatment to begin at 95mm Hg diastolic for all ages and at 90mm Hg diastolic for persons aged 50 years and over. For others in the 90-94mm Hg range it recommended that anti-hypertensive drugs should be started if the diastolic blood pressure is not reduced with non-pharmacologic approaches (Joint National Committee, 1984). The 1988 US Joint National Committee statement endorsed similar thresholds. However it placed more emphasis on the control of other risk factors for cardiovascular disease in terms of cholesterol and alcohol consumption, and the need to adjust prescribing to minimise the side effects for individual patients (Joint National Committee, 1988).

Guidelines in the UK tend to be relatively conservative and as in most countries have been characterised by an increase over time in thresholds for beginning drug therapy. The British Hypertension Society working party reporting in 1989, recommended observing patients with pressures of 95-99mm Hg every 3-6 months, and treating patients under 80 years who have a recorded diastolic pressure over 100mm Hg for 3 to 4 months. It also advised that all patients should be warned against smoking and heavy alcohol intake, and obese patients recommended to reduce weight (Swale et al, 1989).

Whereas such guidelines form the most recent formal or official statements, they may vary from the treatments advocated by clinical textbooks, reflecting both the changing nature of clinical recommendations and the evaluations and preferences of their authors. The Oxford Handbook of Clinical Medicine recommends as guidelines for intervention, but not necessarily for drug treatment, diastolic blood pressure levels at 100mm Hg or over for people under 65 years and 105mm Hg diastolic for those aged 65 and over, thus advocating a relatively high threshold for drug treatment (Hope et al, 1989). Hart (1987) in his textbook on hypertension adopts a rather higher threshold and describes hypertensive medication as mandatory for blood pressure sustained at over 175/105mm Hg, using either diastolic or systolic value, whichever is the greater, whereas below this threshold he regards decisions to treat as depending on whether other risk factors are present.

Differences in recommendations also occur in relation to the choice of drugs and prescribing strategies, while an important aim is to tailor drugs to the needs and responses of individual patients. Although there is some data from trials regarding the effectiveness of specific beta blockers and diuretics, analysed for smokers and non-smokers and other groups, there is no comparable data for newer antihypertensives such as calcium antagonists (Swale et al, 1989).

Policies for detecting people with elevated pressures are also characterised by a more aggressive approach in North America compared with the UK. The US Preventive Services Task Force (1989) recommended that blood pressure should be measured regularly in all persons aged 3 years and over. The Canadian Task Force (1984) suggested that all those aged over 25 years should have their blood pressure measured during any visit to a physician. In the UK there has traditionally been less emphasis on screening and no national policy in relation to blood pressure measurement, which has generally been carried out on an opportunistic basis by general practitioners. As a result the 'rule of halves' which was developed from the findings of surveys of blood pressure in the US reported in the 1970's, is regarded as still holding in the UK (Smith et al, 1990). This

describes a situation in which half the people with hypertension (160/95mm Hg) are undetected, in half of those in whom it has been detected it is untreated, and in half of those receiving treatment it is not controlled. However the introduction in the 1990 contract for general practice in the National Health Service of a new sessional fee for health promotion clinics, including those designed to cover risk factors for heart disease, as well as new requirements for routine health checks, suggests that in the future increasing numbers of people in the UK will be diagnosed and treated for essential hypertension (Health Department of Great Britain, 1989).

The more aggressive approach to hypertension in the US compared with the UK in terms both of screening policies and blood pressure thresholds for intervention is partly attributed to differences in health systems, including the incentives for doctors to treat in fee-for-service system, the greater numbers of doctors in the US, and the greater power exerted by drug companies in marketing their products. However Payer (1989) suggests that the generally more aggressive approach to medical treatment in the US also reflects a cultural belief in the possibility of exerting control over hostile elements, whether these are an inhospitable natural environment, extremes of weather, disease or other adverse circumstances. In this sense the health system can be viewed as part of the broader cultural system. This accords with Parson's (1964) description of the American value system as emphasizing activism, worldliness and instrumentalism, and his belief that health is greatly valued in American society because it is an essential condition for another valued goal, that of achievement, which involves the imputed capacity to perform tasks and roles adequately.

At an individual level, general practitioners occupy a central role in the management of hypertension in the U.K. and thus determine the numbers and characteristics of people with this medical label. There does not appear to be any systematic data on thresholds for drug treatment employed by individual general practitioners, although there is evidence of differences between general practitioners in the attention given to the checking and

recording of blood pressures (Lawrence, 1984; Hart, 1987). There are also differences in the frequency and nature of the advice given by general practitioners regarding smoking, weight reduction and other lifestyle changes to reduce cardiovascular risks and in their attitudes and interest in these preventive activities (Marley et al, 1991; Silargy et al, 1992). Such variations in practice are not unique to the management of hypertension and reduction of cardiovascular risks. Rather they reflect the more general variations which exist in most aspects of clinical practice. This may arise from the uncertain and changing nature of medical knowledge and individual clinician's awareness of current knowledge, as well as their personal preferences, experiences and evaluations which serve to shape their explanatory models. Clinical practices are also influenced by the consultation time available and other health service factors that may limit the provision of optimal care (Anderson and Mooney, 1990).

General practitioners are not only responsible for the diagnosis and treatment of hypertension but also interpret scientific and formal professional statements and advise patients on the nature and management of this condition. General practice as a specialty places greater emphasis than most hospital specialties on understanding patients' explanatory models, given its particular focus on the psychosocial aspects of illness and not merely with treating disease and its position as the initial point of contact for patients. General practitioners thus conform to what Freidson (1970) refers to as a client-dependent practitioner, whereas hospital specialists are colleague-dependent practitioners who receive referrals from their colleagues. There are therefore questions not only of the extent to which general practitioners' technical practices reflect formal professional models, but also of the meanings of this condition that they convey to patients and the extent to which they are aware of and hence able to respond to their patients' beliefs and concerns.

This chapter thus depicts the treatment of 'hypertension' to reduce risks of cardiovascular disease as a product of the particular clinical 'gaze' associated with a biomedical

approach. Furthermore in contrast to the notion of a well-defined category with a firm biologic base, definitions of particular blood pressure levels as desirable or requiring treatment (at either end of the distribution) depend on social evaluations of the costs and benefits of this approach to the reduction of cardiovascular risks, and may be influenced by general cultural values and the influence of drug advertising and health service factors. This in turn is associated with considerable differences in formal policies and professional statements between countries. It may be expected that individual practitioners also differ in their response to the scientific literature and professional statements, thus influencing the numbers of people diagnosed and treated for this condition, especially at the level of 'mild' hypertension.

Chapter 2

PATIENTS' RESPONSES TO HYPERTENSION

This chapter examines hypertension ('blood pressure') from the patients' perspective. It focuses particularly on two aspects of patients' behaviours that are regarded as departing from medical expectations. There is evidence of adverse 'labelling' effects in terms of the implications of the diagnosis for people's psychological state and behaviours, and their non-compliance with drug therapy in terms of its irregular use or dropping out of treatment altogether. The majority of studies are shown to have been concerned to quantify these phenomena, whereas their explanation requires a greater understanding of the meanings of this condition and its treatment in terms of the beliefs, concerns and circumstances of patients.

Departures from medical expectations

Clinically the diagnosis of essential hypertension identifies a minor clinical 'problem' in terms of the existence of a risk factor, which although benefitting from treatment does not have any implications for the individual's immediate health or well-being. However evidence from a large number of studies suggests that the diagnosis of hypertension often gives rise to considerable anxiety with long-term adverse effects on psychological well-being, and may sometimes lead to the adoption of a sick role and high rates of work-absenteeism. Such effects are described as 'labelling effects' to the extent that they form a response to the meanings of this diagnosis for lay people, and the requirements to take medication regularly and have their blood pressure checked. Thus although treated for a risk factor rather than a disease, they are required to assume many aspects of the patient role. They may also experience drug side effects, which may further contribute to self

perceptions of themselves as 'sick' as well as serving to limit their activities more directly. These costs of the diagnosis and treatment of hypertension are regarded as being of particular significance given that high blood pressure is merely a risk factor, while for many people, especially at levels of mild hypertension, treatment will confer no benefit. This identifies an important difference from screening for cancers or congenital disorders, where the main psychological costs occur in terms of worries about the outcome of screening for these conditions, especially for people requiring a retest following an initial positive result. Given the availability of effective interventions the worry associated with diagnosis is generally regarded as far outweighed by the benefits of early detection, with the costs and benefits of a positive result thus being very different from the identification of a risk factor with a low probability of future disease. However as Marteau (1989) cautions, the difference may not be as clear as often presented, as there have been no long-term follow up studies to assess how people interpret a negative result of cancer screening and how this affects their behaviour.

Research focusing specifically on the impact on people of being diagnosed or 'labelled' as hypertensive has mainly been conducted in North America, associated with the introduction of worksite and community based screening programmes. The main aim has been to determine the existence and prevalence of this labelling effect, often through a prospective case control design, with the outcome variable consisting either of a behavioural change, particularly work absenteeism, or a measure of psychological well-being.

An early series of studies based on male employees at a large steel manufacturing plant in Hamilton, Ontario, known as the Dominion Foundries and Steel Company (DOFASCO), drew attention to the implications of hypertension detection for work absenteeism, and suggested that people were adopting a sick role and thus responding to this condition in ways that departed from medical expectations. The initial study undertaken by Gibson and colleagues (1972) was a retrospective analysis of work absence among previously aware and

previously unaware hypertensive employees, and showed that employees who were unaware of their high blood pressure had lower rates of illness absenteeism than those who were aware of their high blood pressure. This was followed by a prospective study conducted by Haynes et al (1978) in which a random two-thirds of male employees (5,400 employees) were screened for hypertension. The results confirmed the findings of Gibson et al (1972) and showed that employees who were aware of their blood pressure before screening were absent for an average of 6.18 days in the previous year, compared with an average of only 3.49 days illness absence for those who were unaware of their blood pressure. They also found that identifying individuals with high blood pressure and informing them of their blood pressure status was associated with a 3-fold increase in illness related absenteeism in the year following screening. In contrast, there was no significant rise for people previously aware of their high blood pressure or for normotensives. The greater increase for the newly diagnosed also occurred whether or not they were started on a treatment regime. This study thus strongly suggested that there was an association between awareness of high blood pressure and increases in illness related absenteeism (using time clock records). Four years after the employees were informed of their blood pressure status the effects were upheld, with the previously unaware workers showing the highest rates of illness absenteeism. This suggested that the effects were long-term (Taylor et al, 1981).

The DOFASCO studies thus identified a long term negative effect of hypertension detection on work absenteeism, which appeared unrelated to whether the men were actually treated or the achievement of blood pressure control. This raised important questions of the possible harmful effects of large-scale hypertension detection programmes at a time when this was viewed as offering an important means of mass prevention of cardiovascular disease. However, particular features of the sample and work situation suggested that the results might not be generalisable. For example, 88% of the study subjects at DOFASCO were hourly paid workers and consisted entirely of male employees, and were thus not representative of the wider population. Various aspects of their job may

have also influenced their readiness to adopt a sick role, including the level of job satisfaction and the physically demanding nature of the work.

Other studies of work site hypertension screening programmes have been based predominately on white collar employees. Their findings have been mixed. For example a study by Alderman and Davis (1976) based on a sample of New York City employees suggested that newly labelled hypertensives did not have increased rates of work absenteeism (based on sickness absences of 5 days or more). During the pre-treatment year the work absenteeism rate was higher among employees with hypertension (aware or unaware) than for all employees. However two years after screening the absenteeism rate had increased among all employees but decreased for hypertensive employees, with the decrease being greatest among those treated on site. This study thus pointed to beneficial effects of screening on the illness absenteeism of hypertensive employees. However these results may be biased by the recruitment of only 69% of the target population and hence of the exclusion of more reluctant participants whose behaviour may have differed from other subjects. Secondly, the measures of illness absenteeism employed excluded illness related absences of under 5 days, although such short term absence may have been concentrated among newly diagnosed hypertensives.

Studies based on white collar employees of the Massachusetts Mutual Life Insurance Company (Alderman et al, 1981; Charlson et al, 1982) produced findings in line with the DOFASCO studies, of a higher rate of illness absence among aware compared with unaware hypertensives prior to screening, as well as a significant increase in illness absenteeism among the newly labelled in the two years following screening. However the effects were much smaller than in the DOFASCO studies, with the overall absenteeism for hypertensives not being significantly higher than for normotensives. This may be influenced by differences in the nature of the job in terms of employees' job satisfaction, its physical demands, and the varying policies in U.S. firms regarding sickness absence and the loss of pay.

Another series of studies has focused on implications of hypertension labelling for patients' psychological well-being. Various measures of psychological well-being have been employed. These range from the reporting of depressive symptoms and poorer perceived health state, to more formal measures of psychological well-being or overt psychiatric disturbance. Furthermore, there are often difficulties in separating the psychological effects of the diagnosis of hypertension from the possible prior influence of personality traits in contributing to the development of high blood pressure itself, thus producing a group which is partly selected in terms of psychological variables.

In one much quoted cross sectional community survey, Bloom and Monterrossa (1981) examined the impact of the hypertension label on inadvertently labelled normotensives, as assessed by the respondents' own report that they had been told in the past that they had high blood pressure. This mislabelled group reported more depressive symptoms, poorer present health and greater decline in health than did the correctly informed normotensive group, thus pointing to a possible labelling effect. However a difficulty in interpreting the findings of this and several other cross-sectional surveys is that the reporting of hypertension labelling may have been selectively recalled and influenced by people's current psychological well-being. Other cross-sectional studies which provide some evidence of the adverse effects of hypertension 'labelling' on psychological well-being include Milne et al's (1985) comparison of hypertensive and normotensive controls, which showed significantly poorer ratings among labelled hypertensives on perceived health state, worry about health and symptom scores. Monk (1981) also found that hypertensives informed of their blood pressure and treated, scored significantly lower on psychological well-being, as measured by the General Well-Being questionnaire, compared with hypertensives not informed. Adverse psychological effects of hypertension detection have similarly been reported by Mossey (1981) as measured in terms of marital adjustment and self esteem, and by Soghikian et al (1981) and Wagner and Strogatz (1984). In contrast to these findings, the MRC trial of mild to moderate hypertension showed hypertension

detection and treatment to be associated with positive effects on psychiatric morbidity (Mann, 1971, 1981). This involved the comparison of a sub-group of 235 trial entrants, a cohort with normal pressure at screen, matched for age, sex and psychiatric state, and a third matched cohort with raised pressure at screen that settled without therapy. A one-year follow-up was conducted using the General Health Questionnaire and a Standard Psychiatric Interview to measure the presence of overt psychiatric disturbance. The results indicated that the initial prevalence of psychiatric morbidity was similar for all groups at the baseline survey, but by one-year had decreased for the trial entrants compared with the two control groups. This appeared to be due to greater 'recovery' from psychiatric morbidity among the trial participants compared with the two control groups during the year. These findings of a positive effect of screening are at variance with the general notion of an adverse labelling effect. Some of the questions raised concerning the validity of these findings were examined further in a larger study of trial subjects (follow-up of the control groups had been discontinued) (Mann, 1981). This indicated that the observed positive effects on psychiatric state were not due to the hypertensive medication prescribed, or to the effects of the drop out of the psychiatrically ill from the trial in leaving a selectively healthy population. Instead they were probably a product of the support received by trial patients. As the author states:

'The likely reason for an improvement in psychiatric morbidity among trial entrants remains a non-specific one - the effect of a supportive relationship on someone with a non-psychotic psychiatric disorder eg. a depressive neurosis or anxiety state. Once selected for the trial the subject is seen regularly by a nurse at a special clinic where there is enough time at each appointment to allow a warm relationship to be established between nurse and patient. The patient knows the relationship is long term and that all complaints during the period of the trial will be thoroughly investigated. Any anxieties over health associated with the knowledge of raised blood pressure are replaced by security that something is being done about it'. (Mann, 1981, p.199)

The author noted that as the follow-up clinics provided by the MRC trial appear to be successful in helping those with psychiatric disorders, patients benefitting from attendance may become anxious when the trial period is ending and the clinic is disbanded.

In contrast to the positive psychological effects demonstrated by the MRC trial, a longitudinal controlled study in general practice in which people were invited for coronary risk screening, including blood pressure, height and weight measures, and history of smoking, drinking, diet and family history of ischaemic heart disease, showed that there was a significant increase in the proportion of the study group with scores of more than 5 on a 30 item General Health Questionnaire compared with their pre screening scores, whereas there was no significant change among the controls (Stoate, 1989).

Quantitative studies assessing the behavioural and psychological outcomes of hypertension detection have thus produced varying results. Some provide evidence of adverse effects on work absenteeism, whereas others do not identify any negative effects. In general there appears to be more consistent evidence of some adverse effects on psychological well-being (although differing in their nature and impact), with the important exception of the MRC trial which demonstrated positive effects on psychiatric states. The differing findings may partly reflect differences in the design of studies. This includes the possible effects of selection in terms of initial recruitment to screening programmes and response rates, the varying measures of illness absenteeism and psychological well-being employed, and the different follow-up periods and comparisons employed. Secondly, it is possible that the effects on psychological well-being and behaviours among people treated (rather than merely diagnosed) for hypertension is influenced by the type and dosage of drugs and the side-effects they produce, and is therefore not purely a response to labelling. In this respect it is important to note that the relationship between psychological and pharmacological effects is complex, with worry and fear contributing to the experience of adverse side effects just as faith in a placebo may produce beneficial effects (Morris and Kanouse, 1981). To the extent that studies demonstrate true labelling effects this indicates that the meanings of this condition for lay people (or 'patients') differ from those held by the medical profession. In particular the condition may be perceived as more threatening in terms of its clinical risks, while the requirement to take drugs on a long-term (possibly life-long) basis and visit the doctor

regularly may lead to people perceiving themselves as 'sick'. Translating this into Freidson's (1970) classification of sociological types of illness, it appears that the formal medical position is to regard essential hypertension (apart possibly from the most severe cases) as being within the realm of primary deviance and represents a minor deviation from the norm which does not give rise to a new identity or social role, although requiring people to cooperate with the doctor. In contrast this condition is often viewed by patients as a more serious deviation and is therefore accompanied by changes in self-identity and behaviours (secondary deviance). This emphasizes the way that medical categories which comprise the basic concepts and explanatory models of professional medicine are not only themselves social products, but are also surrounded by social meanings and interpretations by lay people (or 'patients') which constitute part of the reality of 'illness' and hence determine responses at both a psychological and behavioural level. As Freidson (1970) observes, while disease may be 'there, it is what we, as social beings, think and do about it that determines the content of our lives' (p. 209).

Research undertaken by clinicians and epidemiologists has not focused on questions of the subjective meanings of hypertension for patients but rather aimed to quantify the effects of this diagnosis in terms of its psychological, behavioural and clinical outcomes. Nevertheless these studies have identified some factors that may influence the meanings for patients and hence the outcomes of diagnosis and treatment. One important influence is the clinical management of hypertension in terms of the reassurance and support provided to patients and the nature of the information communicated. On the basis of the findings of the MRC trial, Mann (1981) suggests that a treatment programme which involves a continuing and supportive relationship with professionals may in itself have a beneficial effect on patients' psychological state, and particularly for people with poor psychiatric health at entry to the trial. Other evidence of the effects of special care regimes is provided by Polk and colleagues (1984) in a study based on 14 screening centres in the US participating in the Hypertension Detection and Follow-up Program. Following screening, hypertensive subjects were randomly assigned to either 'stepped care' or 'referred care'.

Stepped care participants were treated and aggressively followed by the programme's clinic staff according to a common protocol, whereas the referred care participants were referred to their usual sources of medical care. The follow-up one year post screening showed that among previously unaware hypertensives there was an increase in the number of days absent from work or usual activities due to illness, disability or injury ('disability days') whereas there was no change for the stepped care participants. For those aware and treated at baseline, there was no change in disability days in referred care but a decrease was reported in stepped care. As the authors note, the various factors that may contribute to illness absenteeism include medication side effects and time taken off for physician visits, as well as potentially adverse psychologic consequences of labelling. However their results suggest that some potentially negative effects can be minimized by hypertension control programmes that provide positive support and follow-up. This accords with more general experience of the positive psychological effects of supportive follow-up for people with a positive result in a screening test (Marteau, 1990).

Other studies of hypertension screening have drawn attention to the possible effects on outcomes of the nature of the message and meaning of the condition conveyed by health professionals. For example, Mossey (1981) in reporting the findings on psychosocial outcomes among the DOFASCO workers, noted that the specific information given to screening participants influenced their psychosocial outcomes as assessed in terms of emotional adjustment, perceptions of self and perceptions of health. The label of 'hypertension' itself appeared to have few deleterious effects, whereas the message 'you need to take drugs to control your blood pressure', was associated with declines on several measures of psychosocial function taken six months later. However the effect was attenuated 12 months after assessment. This suggests that such messages produce measurable, though temporary decreases in psychosocial well-being. However their impact may depend on the context and form of their delivery, and particularly the extent to which they are accompanied by reassurance. Another study which confirms the importance of the portrayal of hypertension and its treatment for patients' responses was undertaken

by Rudd and colleagues (1986) who randomly assigned 296 employees with sustained hypertension six months after initial screening to traditional or reassurance debriefings. In the 'traditional debriefing' patients were given a brochure describing high blood pressure as the 'silent killer', the dangers of untreated hypertension and the importance of regular follow-ups, and questions were answered by health educators in purely factual terms. The 'reassurance debriefings' in contrast began with a specially designed brochure emphasizing blood pressure's natural variability, and the importance of avoiding premature concern. At each visit the health educator also actively solicited and discussed subjects' perceptions and concerns about hypertension and its management, and attempted to reassure inappropriate fears. Not surprisingly, the 'reassurance debriefing' was associated with a significant decrease in anxiety as measured using the General Health Questionnaire and other scales compared with the 'traditional debriefing'.

Another set of factors that is likely to influence the meanings and outcomes of hypertension labelling is the particular characteristics and circumstances of 'patients'. For example, it has been hypothesized that the stronger effects of hypertension labelling on illness absenteeism among DOFASCO workers compared with studies of white collar workers may be associated with their level of job satisfaction, the heavy physical demands of their work, and regulations regarding sickness absenteeism. Other studies have also drawn attention to variations in outcomes among groups defined in terms of sex, race and age (Sexton and Schumann, 1985; Leigh, 1986, 1990). This may reflect the differing meanings of hypertension for these groups, or the ways in which their differing circumstances (particularly their employment position and nature of their work) serves to encourage or constrain sick role behaviours.

As this review indicates, a large number of studies undertaken predominately in North American studies suggests that the diagnosis or 'labelling' of hypertension has adverse effects for patients, particularly in terms of their psychological well-being, and thus forms an important cost, or impact, of hypertension detection and treatment. However although a

number of factors have been identified which appear to influence responses, particularly in terms of the nature of the information and support provided, there has been little direct investigation of the meanings and processes that give rise to patients' psychological and behavioural responses to this condition and thus of people's experience of 'illness'.

A second way in which the behaviours of hypertensive patients are regarded as departing from medical expectations is in terms of their high levels of 'non-compliance' with drug therapy. It has been estimated that in the US more than 50% of people who have hypertension drop out of therapy during the first year of treatment. Of the remaining patients, nearly one third do not take enough of their prescribed medication to adequately control their blood pressure, and fewer than 30% to 50% of hypertensive patients receiving treatment have their blood pressure under effective control (Burrell and Levy, 1984). The Joint National Committee on Evaluation, Detection and Treatment of High Blood Pressure (1984) has stated that the major problem in controlling hypertension is the failure of patients to adhere to therapy over the long term. Also as Bond and Hussar (1991) comment, 'one (also) cannot help but wonder how often patients have been categorised as treatment failures and have had their therapy changed, possibly to more potent and toxic agents, when the reason for the lack of response or an unanticipated altered response was non-compliance' (p. 1986). Data reported in the 1970's showed that the rate of drop out from treatment in the UK was fairly similar to the US, with figures of around 40% in the first year of therapy (Heller and Rose, 1977). There does not appear to be any more recent data on drop outs from treatment, or on the level of adherence to anti-hypertensive medication among patients in the UK who continue to be treated by their general practitioner. However recent studies in Australia (Gilbert et al, 1991) and Sweden (Fallsberg, 1991) indicate that compliance among those who remain in treatment may now be higher than earlier figures from the US suggest.

Patients' non-use and irregular use of drugs prescribed for high blood pressure is not unique to this condition, but instead forms part of a more general non-compliance with medical

advice and treatment. Overall rates of 'non-compliance' with drug therapy are estimated to be around 40%, with rates generally being highest for chronic conditions requiring long term treatment and for complex drug regimens (Bond and Hussar, 1991). From a formal clinical perspective such non-use, or inappropriate use, of prescribed drugs is viewed purely in negative terms as a 'problem' to be overcome, with the aim of promoting a greater adherence to behaviours regarded as being in the patients' own interest. Identifying the causes and the characteristics of people with low levels of compliance is thus important in enabling remedial actions to be taken. Such actions take a variety of forms. They may involve simplifying drug regimens, the use of specially designed containers or packing with labelled doses, changing the types of drugs prescribed, providing the patient with more information in the form of verbal communication or written material, and other measures (Becker 1985; Bond and Hussar, 1991). However central to promoting compliance, and hence increasing the effectiveness of treatment, is an understanding of the factors associated with non-compliance.

The hypothesized factors have traditionally included the personal characteristics of patients (eg. age, sex, educational level), patients' knowledge and attitudes (eg. level of understanding, apathy and pessimism, dissatisfaction with practitioner); treatment variables (eg. complexity of treatment regimen, side effects of medication, inadequate labels, awkward container design); and patient-provider interactions (eg. inadequate or inappropriate communication, inadequate supervision, patient dissatisfaction) (Turk and Meichenbraum, 1991). Traditionally, quantitative studies have aimed to explain non-compliance by identifying the associations between such variables and compliance behaviours.

Compliance with antihypertension medication is regarded as being particularly influenced by treatment variables, and especially the side effects of drugs. This is because the condition is generally asymptomatic and for people with mild hypertension the benefits, if any, of treatment are not potentially achievable until years later. One important factor



influencing compliance may therefore be the type of drugs and dosage prescribed. Trials have demonstrated differences between anti-hypertensive agents in the numbers and type of side-effects reported and drop out rates. For example, one major trial indicated that captopril did not adversely effect any of the quality of life ratings among men with mild to moderate hypertension, whereas methyldopa and propranolol were both associated with a worsening of scores in terms of physical symptoms, sexual dysfunction, life satisfaction, and for methyldopa work performance. Croog et al (1986) suggested that this may be due to differences in their mechanism of action; both methyldopa and propranolol influence the adrenergic nervous system, whereas captopril does not. Another trial reported by Fletcher et al (1992) identified differences in the prevalence and type of symptoms and drop out rates in a trial of cilazapril, atenolol and nifedipine.

There appear to be relatively few studies identifying other factors associated with non-compliance with anti-hypertensive medication. This possibly reflects the central role assigned to drug side effects. However one study undertaken by Norman and colleagues (1985) provides as example of research focusing on patients' knowledge and attitudes. This was based on 442 participants in a risk assessment study conducted in two Pennsylvania counties. The participants were classified as 'compliant' if they gave a positive response to the question 'Are you now taking medication for your high blood pressure?'. A comparison of the responses of this group with 'non-compliers' (drop outs from treatment) showed that two groups differed in their level of agreement with a number of statements specified by the researchers. For example, the compliers were significantly more likely to agree with the statement that taking medication is necessary 'only when I feel tense and nervous', 'is necessary only when I have dizziness or headaches' and 'is not necessary when my blood pressure is normal'. They were also less likely to agree with the statement that taking medication will 'lower my chances of having heart disease'. This and other studies (eg. Meyer et al, 1985) provide an indication of the distribution of beliefs, or at least of publicly disclosed beliefs among compliers and non-compliers. However they can say very little

about the relative importance of particular beliefs to patients and the extent to which they actually influence behaviours.

Another approach to non-compliance is characterised by a socio-organisational rather than an individualistic orientation. This focuses on the characteristics of medical care settings and aspects of health care provision associated with compliance. For example, Schulman (1979) in an intervention study assigned 91 patients attending two hypertension clinics in Michigan to three treatment groups - education, behavioural contracting (involving education plus a jointly negotiated and agreed written contracts with specified target behaviour and a reward), and routine clinic care. Patients were subsequently interviewed to assess their perception of their treatment as being actively patient oriented, based on the hypothesis that greater patient involvement would be associated with more favourable outcomes. This appeared to be supported. Patients afforded a high degree of involvement were significantly more likely to report full understanding of and follow through on treatment recommendations, and were more likely to continue under treatment and to have their blood pressure under control. Such findings are thus regarded as confirming the importance of the nature of patient-provider relationships and the information communicated on patients' responses to hypertension and compliance with treatment.

Quantitative studies of other conditions have often taken a more complex form and examined the association of a large number of variables and compliance behaviours. However although this approach has been important in identifying factors associated with non-compliance with drug therapy, it has not provided an adequate explanation of this phenomena (Becker, 1985). In particular many people possessing what are identified as compliance enhancing characteristics do not necessarily demonstrate such behaviours. Also despite the accumulation of research findings and the adoption of various strategies specifically designed to improve compliance with medical advice, such as information leaflets and various aids to remembering, high levels of non-compliance appear to remain a

feature of patient behaviours. This characterises both adherence with prescribed medication and the adoption of various life style changes, such as dietary patterns, smoking behaviours and the uptake of preventive services.

Understanding patients' behaviours

This chapter has described two aspects of hypertensive patients' behaviour that depart from medical expectations in terms of what appear to be the adverse psychosocial impact of this condition and non-compliance with drug therapy. It shows that although a large number of studies have provided evidence to document these 'problems' and identified some contributing or modifying factors, they have not satisfactorily explained patients' responses. This situation can be attributed to the particular gaze that traditionally characterised research in this area and which emphasizes the existence of a single (medical) conception of reality based on the disease model. As a consequence, as Dingwall writing in 1976 observed in relation to research on illness behaviour:

'... the notion of illness itself is excluded from most investigations, it is taken directly from medical practitioners and treated as a resource for the study rather than being the object of study.' (p. viii)

At about the same time as Dingwall was commenting on the relatively small number of studies which focused directly on the subjective reality of 'illness' in terms of lay people's explanations and experience of disease, Stimson (1974) made a similar point in relation to research on non-compliance with medication which failed to elicit the patients' perspective. As he stated:

'people have ideas and attitudes about the use of medicines, they are not taking them in a thoughtless vacuum.' (p. 101)

From the late 1970's there has been considerable growth in research which is concerned to elicit the subjective reality of 'illness' in terms of lay people's explanations and experience of 'disease', and to understand patients' behaviours and concerns in the context of their own

circumstances, priorities and beliefs. This has been partly associated with the study by anthropologists of belief systems in modern industrial societies including those within the health arena. In particular Kleinman (1980, 1984) identified the professional, popular and folk arenas as each being involved in the care and treatment of sick people and characterised by their own explanatory models tied to specific systems of knowledge and values. He depicted these models as to some extent overlapping but also as containing distinctive aspects and serving to explain any or all of five issues - aetiology, onset of symptoms, pathophysiology, causes of sickness and treatment. Patients' explanatory models are described by Kleinman as the product of various influences, including the broader lay culture, their own knowledge and personal experiences, and the information and advice provided by doctors and by medicine more generally through its influence on the lay culture. Furthermore patients' explanatory models are usually not fully articulated and undergo reinterpretation as new information arises, thus forming dynamic entities rather than static constructs. To the extent that patients' beliefs do not overlap with the explanations and expectations of professional medicine, and doctors neither personally hold nor are aware of patients' particular beliefs and concerns, this is seen as giving rise to problems of communication, and possibly to what doctors regard as inappropriate behaviours and responses by patients in terms of dropping out of treatment or viewing conditions as more or less severe than their evaluation in biomedical terms. An important aspect of clinical practice is thus regarded as the need to elicit and respond to patients' explanatory models (Kleinman, 1978).

This new emphasis and concerns of anthropologists was paralleled by the emergence of phenomenological perspectives within medical sociology, which were based on views of society that regard human beings as actively involved in a process of interpreting, evaluating and defining the meaning of their world and the world of others, with these subjective meanings forming an important influence on their actions. This approach thus contrasts with the view of the social world that characterises epidemiology and structural perspectives within sociology, with their emphasis on the objective nature of social phenomena and individuals as fairly passive performers of social roles. A

phenomenological perspective also challenges the notion of a single reality and access to the 'truth', and instead emphasizes the existence of multiple realities, including the distinction between disease and illness or what Kleinman (1984) refers to as professional and popular explanatory models. Furthermore research eliciting these subjective meanings and responses, and thus an understanding of the beliefs and circumstances that give rise to specific outcomes, is regarded as requiring qualitative methods. This often involves open-ended interviews to enable the researcher to gain a closer and more detailed view of the subjects perspective than is generally possible in a standardised interview. Responses are also analysed in the context of respondents' accounts rather than being abstracted as discrete items of data, thus enabling beliefs and behaviours to be more directly linked (Walker, 1985).

There is now a large and growing body of research which focuses on questions of the beliefs and meanings regarding health, disease and illness within the popular arena. Some research is concerned with identifying general societal (or subcultural) beliefs, and attempts to make links with broader cultural values and social processes (eg. Sontag, 1979; 1988; Herzlich and Pierret, 1987). Other studies have focused on aspects of lay or patients' explanatory models and have shown that although often departing from professional medical explanations they nevertheless are often complex and have their own logic (Blaxter, 1983; Calnan, 1987; Williams, 1986).

In terms of hypertension, a few studies have provided data on general lay notions of the causes of this condition (Cox et al, 1987; Calnan, 1987). The only detailed study of patients' beliefs surrounding this condition was conducted by Blumhagen (1980) based on 103 men attending the hypertension clinic at Seattle Veterans' Administration Centre. He found that in contrast to current professional views, 72% of the sample regarded their hypertension as a physical illness caused by past social and environmental stress. The study did not focus specifically on the men's psychosocial or behavioural responses to hypertension. However there was some indication that their belief in stress as a cause

encouraged them to avoid stressful situations and to take extra rest, thus identifying a link between their personally held beliefs and behaviours. This further emphasizes that the ways in which medical conditions are responded to depends not only on the underlying physiological processes and symptoms but also on their social meanings and evaluations, including notions of the cause of the condition, factors associated with exacerbations, and beliefs regarding future risks. These meanings and evaluations may be influenced by the wider lay culture and an individual's personal circumstances and priorities. For example, a person with a history of heart disease may worry more about their own risks than a person without such a history, while concerns about the implications for their job prospects or finances may also influence the seriousness accorded to the condition and coping strategies.

In terms of non-compliance with medical advice or treatment this is again interpretable in the context of the individual's personal beliefs, experiences and choices. For example, Cornwall (1984) in a study of 24 people in London's East End showed how their behaviours were non-compliant in terms of rejecting health education messages advocating life style changes. However this appeared to be based on the belief that it was difficult to cheat fate or to overcome the influences of their constitution, as well as the value they attached to the benefits that possibly unhealthy habits brought, such as the relaxation obtained from smoking. Frankel and colleagues (1991) have also presented data that suggests that the general public resistance to health education messages partly reflects the lack of correspondence between the simple health education messages, and the ideas held by the public. The latter are often more sophisticated than is generally appreciated by health educators and correspond more closely to the questioning traditions of epidemiology. For example, hereditary susceptibility is considered to be one of the most important risk factors for heart disease by the lay population and is also considered an important risk factor by epidemiologists, but is rarely discussed in health education material.

In terms specifically of compliance with medication, qualitative research has again challenged the traditional view that non-compliance necessarily represents passive

'defaulting' from what is deemed to be in the patients' best interest. Instead it suggests that the non-use of prescribed medication may sometimes occur as a result of the patients' active attempt to exercise control over their condition and their personal assessment of the costs and benefits of particular actions. This is illustrated by Conrad's study (1985) based on in-depth interviews with 80 people with epilepsy, of whom 34 regularly changed their medication. He identified four reasons for this self-regulation. These were testing the continued need for the drug, trying to avoid becoming dependent on drugs, trying to move out of the category of 'epileptic', and modifying their dosage in relation to their perception of risks of a seizure. These patients' irregular use of prescribed drugs although departing from medical expectations, can thus be viewed as rational within the context of their own concerns and circumstances and the meanings surrounding their epilepsy and its treatment. Similarly, Arluke (1980) shows how rheumatic patients often interpret the medication to test and check its effectiveness, and Kelleher (1988) in a study of diabetic patients draws attention to the trade-offs that patients are often forced to make between adhering to a regimen for controlling diabetes, including controlling their weight, and their other valued goals such as the desire to remain sociable. Weintraub (1984) coined the term 'intelligent non-compliance' to express the fact that patients often make decisions not to comply fully, and usually take a reduced dose or cease the medication altogether.

In contrast to traditional approaches which depict patients as failing to 'obey' medical advice or 'defaulting', this research thus views patients as active decision-makers who weigh up the expected benefits against various costs of treatment. The latter may include concerns about side effects, the symbolic meaning of being 'on drugs' or 'under the doctor', and their compatibility with other valued activities. These perceived costs and benefits may thus vary according to the particular medical condition, and the individual's own beliefs, concerns and circumstances. An important implication is that repeating or presenting medical messages more clearly and following an educational model is unlikely to change patients' behaviours. Instead what is important is that doctors are aware of and thus able to respond effectively to patients' beliefs and concerns. Furthermore what are regarded by

patients as relevant factors to be taken into consideration may involve the wider implications of the medical condition or of following medical advice for their life and activities. This is exemplified by Cornwall's (1984) finding of the positive value placed by many of the working class people she interviewed on the relaxation obtained from smoking, and Kelleher's (1988) description of diabetic patients' desire to remain sociable as forming an important barrier or personal cost of adherence with a strict regime for controlling their illness. In this way people's experience of illness and health-related behaviours can be regarded as forming part of and closely interlinked with their more general life circumstances and goals, rather than forming a completely separate and distinct reality. People's general social environment can thus be regarded as a stock of knowledge and source of explanations and understandings, while their particular circumstances, such as their employment and experience of stresses also contribute to meanings and assessments of the costs and benefits of different courses of action.

An important question relates to the way in which beliefs, values, circumstances and priorities vary between different groups within society, giving rise to differences in their readiness to conform with medical advice and treatment and undertake health promoting activities (McIntyre, 1986). In particular, attention has focused on the implications of socio-economic status for health related beliefs and behaviours, with the aim of explaining the lower rates of uptake of preventive services and lower levels of conformity with advice regarding smoking and diet among the more socially and economically disadvantaged groups (Bennett and Smith 1992; Townsend et al, 1988). One area of research has focused on questions of whether such groups hold beliefs and values that differ from the middle class culture and expectations of medical professionals, in terms for example of placing a lower value on health and believing that health and illness is more a matter of 'chance' or 'fate' rather than being within an individual's personal control (Blaxter, 1983; Pill and Stott, 1982, 1985; Calnan, 1989). Although there is some evidence of a more fatalistic orientation among working class groups, it appears that this may represent a realistic appraisal and

response to their disadvantaged circumstances, rather than forming the product of a distinctive subculture that is transmitted across generations (Blaxter and Paterson, 1982). Differences in social circumstances may also have a direct effect on assessments of the costs and benefits of particular actions, with examples including the influence of people's employment situation and satisfaction with their job on work absenteeism and the adoption of a sick role, and the effect of car ownership in increasing the accessibility of preventive health services. Similarly, Locker's (1983) study of people with severe rheumatoid arthritis showed how their general life circumstances and resources influenced their ability to cope with the disabling effects of this condition, and thus determined the degree of handicap they experience. Socio-economic position has thus been shown to be associated with differences in beliefs and expectations regarding health and illness, and to influence the perceived costs and benefits of particular health related behaviours and coping responses. However little is known of the precise significance of socio-economic position in relation to long term non-disabling conditions.

Social classes are not necessarily homogenous groups, with one important division being in terms of gender. Differences in the cultural experiences and expectations of men and women are regarded as having implications for health knowledge and behaviours. In general, women are more involved than men in health matters, experience more medical care contact, and also may more readily acknowledge and reports symptoms of illness reflecting differences in cultural expectations and in the social roles of men and women. In addition, culturally shaped images and expectations have been shown to influence doctors' diagnosis and prescribing, especially for conditions such as depression which have a strong gender-related image (Anson et al, 1993; Hibbard and Pope, 1983). However there is little information regarding the meanings and responses to specific non-psychiatric conditions among men and women.

A third major form of social division is provided by the existence of ethnic minorities who comprise nearly five per cent of the population of the UK. An ethnic group refers to 'a part or a section of society whose members are thought by themselves or others to share a common origin and important elements of a common culture, and who participate in activities which uphold this culture' (Billington et al, 1991 p. 87). Ethnicity is thus not identical with race but instead depends on the social construction of a difference in which biological or racial factors play a part, based on the sharing of a common culture and history. This common culture in terms of language, dietary patterns, and beliefs regarding health, illness and treatment, may thus give rise to important differences in perceptions of symptoms, illness behaviours and expectations and responses to treatment from that characteristic of the broader lay culture. The degree of difference will depend on the extent of assimilation or separateness that occurs within the country of settlement, as well as the initial congruence between the beliefs and practices of the ethnic minority and the host society in terms both of health subsystem and wider aspects of their lives. However the influence of ethnicity on beliefs and responses to illness and treatment has been particularly neglected, with published research on ethnic groups mainly focusing on variations in disease patterns and the needs by some ethnic groups of special forms of provision, including dietary requirements, female doctors and translated materials (Donovan, 1984).

Chapter 3

RESEARCH STUDIES: AIMS, METHODS AND RESPONDENTS

This chapter first outlines the aims of the research and describes the rationale for the general research approach. It then outlines the methods adopted for the studies of patients and general practitioners, describes practical aspects of the conduct of the research, and addresses issues of generalisability and validity. Finally, the social characteristics of the patients and general practitioners who form the study groups are described.

Aims of research

The primary focus of this research is the popular health arena and in particular the meanings and responses of patients to being diagnosed and treated for hypertension by their general practitioner. It thus seeks to elicit patients' explanatory models in terms of their understanding of 'high blood pressure' and 'hypertension', what they regard as the causes of this condition, their views of its significance, and beliefs and practices regarding the use of prescribed medication and other remedies to control their blood pressure. It also examines the more general impact of the diagnosis and treatment of hypertension at a psychological and social level both shortly following the diagnosis and in the longer term. This involves a consideration of the anxiety and distress patients experience, and whether they regard themselves as 'sick' and modify their behaviours accordingly.

It was decided initially to examine the beliefs and responses of two groups of hypertensive patients defined in cultural terms. These are people referred to for convenience as 'White' who comprise the dominant cultural group of Caucasian and predominately UK born people and people born in the West Indies. Hypertensive patients of Afro-Caribbean origin were

selected for study for a number of reasons. Firstly, an impetus for the present research lay in the concerns expressed by a senior academic in the Department of General Practice at St Thomas' that he felt he was not able to communicate effectively with his Afro-Caribbean hypertensive patients, as he had little idea as to what they really believed about their high blood pressure and its treatment and whether they took the drugs he prescribed. In population terms, people of Afro-Caribbean origin comprise the second largest ethnic minority after people from India (Hasker, 1988) and are concentrated in the London area. In the London Borough of Lambeth where St Thomas' hospital and its academic department of General Practice are located people of Afro-Caribbean origin comprised 12% of the population in 1981, with a further 11% of the population accounted for by other ethnic minorities (Department of Environment, 1983). Afro-Caribbeans also exhibit relatively high rates of stroke compared with the white population in the UK with death rates for men being 76% higher and twice as high for women compared with the general population, although their rate of heart disease is rather lower than for the general population (Secretary of State for Health, 1992). This pattern of high rates of stroke among the Afro-Caribbean population also characterises death rates in Jamaica (Cruickshank, 1989). There is some evidence that this is associated with a higher prevalence of hypertension and with higher mean pressures (Grell, 1983; Marmot and Rose, 1983). Explanations of the differences in blood pressures between white and black populations include pathophysiological factors as well as differences in salt intake, stress, obesity, diabetes and chronic renal disease (Materson and Preston, 1989; Saunders, 1991).

In view of the possible interaction and influence of cultural beliefs and more general life circumstances on responses to medical conditions the groups of 'White' and Afro-Caribbean hypertensive patients studied were initially restricted to working class people who comprise the majority of the population in the study area. As a group manual socioeconomic groups have relatively high rates of cardiovascular mortality, with the SMRs for both stroke and coronary heart disease having a steep class gradient among both men and women (Secretary of State for Health, 1993). This appears to be associated with a greater

prevalence of high blood pressure as well as differences in rates of smoking and overweight (Shaper et al, 1981).

Interviews with the groups of 'White' and Afro-Caribbean working class patients identified differences in their patterns of use of the prescribed drugs. The 'White' patients appeared to be taking the drugs daily as prescribed, whereas the Afro-Caribbean frequently 'left-off' the drugs as a deliberate strategy. This raised questions of the extent to which the differing patterns found among these groups of White and Afro-Caribbean patients also exist among other sections of these communities in terms of different age or social class groups, and particularly whether the compliant behaviour of the group of White working class patients was confined to this fairly disadvantaged section of the White population or reflected a more general response. This latter question was examined based on a further study involving interviews with a small group of white middle class hypertensive patients living in Surrey.

The studies of patients' views and responses to hypertension are complemented by a study of the general practitioners in the practices attended by the groups of working class patients. The interviews with general practitioners had two main aims. Firstly, to examine aspects of general practitioners' own explanatory models and practices and particularly their views of the causes of high blood pressure and thresholds for drug therapy. This was based on the premise that the explanatory models held by individual clinicians do not necessarily conform with formal professional statements. In particular general practitioners' own beliefs may be influenced by the lay culture and 'popular' beliefs through their role as the initial point of contact for patients. Secondly, this study explored general practitioners' awareness of patients' beliefs and responses to hypertension, with the aim of contributing to an understanding of the nature and extent of the communication gap between general practitioners and their patients.

There are a number of notable features of this series of studies. Firstly, despite the large numbers of people currently diagnosed and treated for high blood pressure and the likely increase in routine blood pressure checks associated with the reforms in general practice, there do not appear to have been any UK studies examining the social and behavioural impact for patients of being diagnosed and treated for high blood pressure, with the exception of the MRC trial (Mann, 1981, 1984). However this trial focused on psychiatric morbidity and involved a special care regimen rather than the usual general practitioner care. Secondly, little is known about the level of adherence to the prescribed medication among general practice patients who remain in treatment, or of patients' own explanations for their non-adherence to the prescribed drug regimen. Thirdly, although a number of studies have employed qualitative methods to elicit the meanings of illness for patients these have mainly been confined to disabling or stigmatising conditions, with the only study that has focused specifically on eliciting patients explanatory models of hypertension being conducted by Blumhagen (1980) in Seattle. There have also been few studies of the Afro-Caribbean population, with the exception of Thorogood's (1988) study of the health and management of daily life amongst women of Afro-Caribbean origin living in Hackney and Donovan's (1986) study of beliefs about sickness among small groups of Asian and Afro-Caribbean people. Fourthly, there has been a tendency to focus exclusively on eliciting the patients' perspective, whereas an important assumption of this research is that general practitioners' own explanatory models may vary from formal professional models, and that individual general practitioners may also differ in their awareness of and responses to patients' beliefs and behaviours. The only study that appears to have examined the three aspects of the patients perspective, the clinicians perspective and the clinicians views of how patients regard their condition, was conducted by Helman (1985) in Cambridge, Massachusetts based on patients with chronic psychosomatic disorders.

These studies thus explore a broad range of issues that are shaped by the concerns of clinical practice and public health as well as by more distinctly sociological questions. However the primary theme and focus of this thesis centres on the beliefs, meanings and significance

of high blood pressure in the lives of White and Afro-Caribbean patients and their responses to the prescribed drugs and use of other remedies in its control. Data from the interviews with general practitioners is mainly employed to explore key themes that emerge from the patient interviews and thus to contrast the patient and practitioner perspectives.

Research approach

The research derives from a phenomenological perspective which emphasizes the subjective nature of social reality and depicts individuals as purposeful actors whose perceptions, meanings and values serves to guide their behaviour. Behaviours thus require to be understood in terms of the meanings they have for the individuals involved or what is described by Schutz (1972) as their 'contextual significance'. This broad perspective is frequently contrasted with the assumptions of structural perspectives which emphasize the objective nature of social phenomena and the ways in which these constrain behaviour, with individuals thus responding fairly passively to social forces and acting out social roles and expectations. However these two ways of viewing the social world contain within them different schools of thought and perspectives concerning the relationship between individuals and society, and the determinants of prevailing forms of social organisation. In terms of a phenomenological perspective these differ in the extent to which they acknowledge social reality external to the individual. For example, ethnomethodology regards members as accomplishing their own social world and therefore focuses on their methods and accounting procedures, whereas other traditions acknowledge the action-constraining nature of social reality and the existence of shared knowledge and meanings. Taking this latter position, Bhaskar (1975) argues that social structure and their coercive effects may be opaque to actors themselves, but nevertheless social contexts give meaning to action and provide some of its consequences. Schutz (1972) similarly emphasizes that social interaction is shaped by what he refers to as 'stocks of knowledge' or 'taken for granted assumptions' about the world. These stocks of knowledge are things known in common with other members of society, and passed on from generation to generation through

our socialisation process, but are constantly revised on the basis of interaction with others. Such stocks of knowledge are regarded by Schutz as culturally determined and may thus be expected to lead to differences in perceptions and responses to medical conditions to the extent that particular groups maintain their distinctive stock of knowledge. The present enquiry with its focus on meanings and responses among different cultural groups to a medical condition (high blood pressure) thus accords with a phenomenological perspective as defined by these writers.

The aim of understanding how individuals subjectively perceive, experience and respond to a medical diagnosis, gives rise to the use of qualitative methods. This approach emphasizes the discovery of meanings rather than the testing of a priori hypotheses, and encompasses methods that focus on determining the quality or nature as opposed to the quantity or amount of a thing. This involves a more inductive and flexible approach than is characteristic of quantitative research, with the data itself giving rise to categories and explanations. A relatively open interview format also allows the respondent to introduce ideas and explanations that were not anticipated by the researcher and encourages the individual to make links between their beliefs and behaviours, thus explaining their reasons for their actions or causes of their worry and distress. The type of in-depth interview associated with qualitative methods has thus been described by Burgess (1982) as providing:

'the opportunity for the researcher to probe more deeply, to uncover new clues, to open up new dimensions of a problem and to secure vivid, accurate, inclusive accounts that are based on personal experiences.' (p. 107)

This form of interview with its conversational, informal approach also often serves to identify a different type of data from that frequently recorded in response to structured questionnaires. This is because the more informal conversational approach is generally regarded as less judgemental or requiring that 'correct' knowledge is displayed, and hence encourages people to reveal what they 'personally' believe and 'actually' do rather than

what they think they 'should' believe or are 'expected' to do. This is captured by Cornwall's (1989) distinction between 'public' and 'private' accounts. She describes public accounts in general as drawing attention to the aspects of people's experience and to ideas and values that they believe are likely to win 'public' approval (ie. the approval of the person to whom they are talking), and goes on to explain:

'Public accounts of health, illness and health services do the same things but have an added dimension which is that they draw attention to aspects of experience, ideas, and values that people believe are acceptable to doctors and compatible with a medical point of view. This is because health and illness are subject to modern, scientific and medical legitimisation - ie. to medical ideological domination' (p. 204).

In contrast she describes a 'private' account as the way in which a person would respond if thinking only what he and the people he knows directly would think and do. Private accounts spring directly from personal experience and from the thoughts and feelings accompanying it'.

Both types of accounts are thus selective and partial and represent a different aspect of social reality. The extent to which these accounts differ depends on the degree of perceived acceptability of their private account. One area in which public accounts and personal beliefs and behaviours frequently diverge with particular relevance for this study is in terms of patients reporting of their level of adherence with medication instructions as recorded through the conventional structured interview. Large numbers of people have been shown to over-estimate their adherence to expected behaviours and hence bias their reports in a socially desirable direction (Roth, 1987). This process has long been recognised and was commented on by Hippocrates writing on decorum and the physician in 430 BC, who cautioned against relying on patients self-reports of their compliance with medical regimens because he believed that 'patients often lie when they state they have taken certain medicines' to please the clinician or to avoid disapproval. The main response to this behavioural phenomenon in quantitative research has been to develop more objective measures. One approach has involved the use of various indirect measures such as pill counts and compliance monitors. However each of these approaches is subject to

behavioural manipulation by patients to overestimate their compliance. For example, pill dumping has been shown to be practised, thus leading to overestimates of actual use and invalidates pill counts (Pullar et al, 1989; Rudd et al, 1990). Computerised monitoring although recording each time the patient removes the cap of the medication container is also open to patient manipulation as it provides no indication of whether or how much medication was taken (Bond and Hussar, 1991). Recognising the effects of these behavioural influences a number of studies have relied on more direct (and secret) methods of determining compliance through the chemical assay of blood or urine and the use where short half-life drugs are involved of tracer compounds with the medication (Feely et al, 1987; Maenpaa et al, 1987). Such elaborate methods are clearly costly and time consuming to administer and may also invoke ethical problems if patients are required to take additional marker substances. Many researchers thus favour patients' self-report questionnaire to determine patients' compliance behaviour, despite the known underestimate of non-compliance due to a reluctance to disclose (Morisky et al, 1986; Sackett, 1976). In comparison to the traditional formal interview based on a structured questionnaire, qualitative research methods including informal, conversational, interviews create a more friendly and less judgemental environment. In this situation people are more likely to reveal their personal and private accounts and thus provide information that reflects more closely their actual beliefs and behaviours.

This issue of strategies for eliciting patients' use of prescribed medications has been considered in some detail as it draws attention to fundamental differences between quantitative and qualitative research and their implications for the study of an aspect of human behaviour that is surrounded by clear professional expectations, and which may therefore give rise to considerable differences between public and private accounts. Furthermore whereas the aim of qualitative research, is to quantify and explain what is viewed from a medical perspective as patient 'default', the aim of qualitative research based on an interpretive perspective is to elicit individuals' subjective beliefs and explanations for their behaviours.

Research studies

The research involved three related studies. Initially interviews were held with small groups of White and Afro-Caribbean working class patients who were being treated for high blood pressure (essential hypertension) by general practitioners in Lambeth. These patient interviews took place over a six month period in 1987. They were immediately followed by interviews with a group of general practitioners who worked in the practices from which the working class patients were drawn. Thirdly, a small group of White middle class hypertensive patients were studied to examine the possible differences in the beliefs and behaviours of social class groups associated with differences in their knowledge, values and general life circumstances. The interviews with middle class patients were conducted during 1989. Although the patient studies were spread over a period of time, all the interviews were conducted by the same interviewer and an identical research approach was adopted. The findings of these studies are therefore considered together.

Recruiting respondents from among patients who were currently being treated by their general practitioner for high blood pressure necessarily excluded those who had dropped out of treatment altogether. The nature of general practice records means that patients who drop-out from treatment are difficult to identify and requires a community or practice survey. Patients who drop out of treatment include a relatively large number of people with fairly mild hypertension and may differ in their perceptions of high blood pressure and/or attitudes to the prescribed drugs compared with those who continue in treatment. The present studies thus focus on a subset of people with high blood pressure who have remained formally under their general practitioners care.

Patient interviews

There are no precise rules governing the numbers of people or situations studied in qualitative research. This very much depends on the purpose and general design of the

study, as well as on various practical considerations. For the main study of White and Afro-Caribbean working class patients a target of 30 interviews for each group, each equally divided between men and women, was set. This was regarded as providing a sufficient number of respondents to analyse patterns in each category and yet was manageable by a single interviewer, which has the advantage of increasing consistency. The requirement to recruit equal numbers of men and women in each group was based on the premise that there might be important gender differences in views and responses to this condition, although in practice few differences were identified. For the subsequent study of White middle class hypertensive patients a target of 18 completed interviews was set, again equally divided between men and women.

Three criteria were employed in selecting patients for interview in addition to ethnicity and socio-economic position (as judged from address or recorded occupation). These criteria were that patients should be: 1) aged between 35 and 55 years, which excluded women with temporarily high blood pressure associated with pregnancy and confined respondents to people of working age, 2) have been treated for high blood pressure for at least one year to allow stable patterns of responses to have developed; and 3) were not currently receiving medication for any chronic condition, as this would make it more difficult to identify the implications of high blood pressure.

The initial approach to working class patients was made through a letter sent to general practitioners (principals) at fifteen practices in Lambeth. This briefly described the study and asked if they would be willing to supply the names and addresses of patients currently treated for high blood pressure. This letter was signed by the Professor of General Practice at St Thomas' whose endorsement of the study was therefore regarded as valuable in encouraging general practitioners' participation. Each of the fifteen practices agreed to assist. Six of the practices kept hypertension registers. In the other nine practices the general practitioners were asked to provide a list of their White and Afro-Caribbean hypertensive patients from which potential respondents could be selected.

The fairly small numbers of middle class people in Lambeth meant that only four respondents were recruited from this area for the study of White middle class hypertensive patients. Fourteen middle class patients were recruited from practices in Thames Ditton (facilitated by a colleague, Dr Ridsdale). This is an affluent commuter area in the Home Counties situated about 13 miles south west of Lambeth.

For hypertensive patients who fulfilled the selected criteria, their name, phone number (if any), most recent blood pressure and current medication were recorded from their case notes. They were then sent a letter to briefly introduce the study, explain that their general practitioner had given their name, and asked if they would be willing to talk to an interviewer (Judy Martin) about their high blood pressure. They were assured of the confidentiality of their responses.

The letter was generally followed by a telephone call to arrange a time for an interview, although for some respondents in Lambeth who had no phone or phone number recorded in their medical records, or who were ex-directory, it was necessary for the interviewer to turn up unannounced at their home. Another general problem in Lambeth was that people were often hesitant to open their door to a stranger, especially if they were not expected, as a result of the high level of violence and crime on the estates. The interviewer herself also had to be constantly aware of possible dangers when walking between her car and the respondent's home (usually a flat on a large council estate) and sometimes had to diffuse potentially threatening situations in encounters with groups of youths on the estates.

The most productive time for finding people at home was generally in the early evening as most people worked at least part-time. This meant that most of the interviews had to take place in the lighter summer months. Many call-backs were required in Lambeth, with the record being seven visits to an address to achieve an interview.

Seventy-four working class patients were approached to achieve a final group of 60 completed interviews. No contact was made with nine people, and three refused to be interviewed. Of the 62 people interviewed, one was omitted from the analysis because at interview she appeared to be severely confused and another respondent was omitted because his spouse was present and appeared to influence the interview. For the middle class group twenty patients were approached to achieve the target of 18 interviews. One person was not successfully contacted and one was not in the appropriate socio economic category.

Once contact with respondents had been made the interviewer was generally warmly welcomed. It was usually possible to arrange for the interview to take place in a room apart from other family members (and the noise of TV!). The respondents were asked if they minded the interview being tape recorded to reduce the problem of having to write down what they said. This was acceptable and it appeared that the tape recorder was soon forgotten.

The interviews were based around a schedule of open questions which relate to five broad areas - their home circumstances, the diagnosis of their high blood pressure, its causes and effects on their life, and the things they do to control their blood pressure (Appendix D). This schedule was designed as an interview guide and was developed following a series of informal patient interviews conducted by the author. The interview guide aimed to ensure that the same core group of topics were discussed with everyone and thus helped to make the interviews more systematic and comprehensive, although as the study progressed the interviewers familiarity with the topics meant that this aide-memoire was hardly required. The guide was not meant to constrain or limit the issues discussed, with the interviewer listening for cues following their train of thought and issues of particular interest, and seeking amplification and clarification as appropriate. Questions or topics did not require to be taken in any particular order, with the aim being to follow the flow of the conversation, with the interviewer being free to phrase questions as appropriate.

Although it is usual for the main researcher to conduct qualitative interviews, teaching and other research commitments meant that this was not possible. All interviews for both the patient and general practitioner studies were however conducted by a single interviewer (Judy Martin) with considerable experience of interviewing. She and the author worked together in developing the interview guide and met regularly to go through individual interviews. This provided an opportunity to review whether aspects had been explored sufficiently, whether cues offered by patients had been taken up, and whether respondents had been given sufficient opportunity to explain and elaborate, etc.

The interviewer felt she had been able to establish a good rapport with most respondents from all social groups. Her knowledge gained in the pilot interviews of Afro-Caribbean people's use of herbal remedies and their tendency to seek second opinions from private doctors was important as these practices might not otherwise be disclosed to an 'outsider'. An advantage of an interviewer being from a different cultural background is however the lack of common assumptions, which means that unfamiliar beliefs, such as regarding herbal remedies, are discussed and explored more fully rather than being taken for granted. The main difference between the interviews with working class and middle class patients was that the middle class respondents asked a greater number of questions and required more details about the aims and methods of the study.

It appeared that the relaxed atmosphere and friendly conversational nature of the interview, and its focus on a condition with which they had personal experience, meant that most people enjoyed the opportunity to talk about their blood pressure. They also appeared to freely describe their own beliefs and feelings rather than giving a public account, except in terms of the reporting of impotence as a side effect of the drugs among men. In other areas, people frequently described worries, thoughts and behaviours to the interviewer which they said they had not told their doctor - often for fear of being thought stupid or not being a 'good' patient. This was especially true of the Afro-Caribbeans'

irregular use of the prescribed medication which they kept from their doctor. Particular attention was paid during the interview to ensuring that the high level of compliance with drug therapy reported by White patients reflected actual behaviours rather than representing a public account or expected behaviours. However the way this was reported in terms of the conviction and definiteness of the response, the description of strategies for remembering, and their frequently bringing the bottle with the day's tablets to show the interviewer, all suggested that these people were describing their actual behaviours and were genuine compliers.

All interviews were tape recorded and generally lasted about one hour, although the total length of time the interviewer was in their home was usually considerably longer. Following the interview, the interviewer recorded any notes and impressions of the session that might form useful background material.

General practitioner interviews

The 15 general practices who provided the names of hypertensive patients in manual occupational groups were contacted by letter following the patient interviews and asked if they would be willing to talk to the interviewer about their management of hypertensive patients. Twenty one of the 24 general practitioners named by the group of working class patients as their personal doctor were interviewed. Of the other three general practitioners, one was omitted due to illness and two because of being 'too busy'.

The interviews with general practitioners were again based on a schedule of open questions. This covered general aspects of their practice, their own approach to the management of hypertension, their perceptions of its causes and the explanations they give patients, and their views concerning patients' beliefs and worries, adherence to the prescribed medication and use of alternative remedies or healers (Appendix E). The interviews were all tape recorded and conducted in a similar manner to the patient interviews. All interviews took place in the doctor's surgery and lasted about 40 minutes.

An important difference between the patient and general practitioner interviews was the more formal nature of the latter. This was associated with the less relaxed atmosphere of the surgery setting, as well as the more unequal nature of the relationship between interviewer and medical professional compared with that of interviewer and lay respondent. The main implications were probably in relation to the more personally sensitive questions. For example some doctors may have given a public account of the causes of hypertension and their management of this condition, rather than revealing their personal beliefs. General practitioners' responses may therefore underestimate any differences between formal clinical knowledge and their own beliefs and practice styles.

Analysis of data

The interview tapes fully transcribed shortly following the interview, apart from purely social conversation. The tapes were also retained and were listened to when this was felt to be helpful in analysing the transcripts. Analysis was carried out manually by the author. This was extremely time consuming, as the total number of transcripts is fairly large for qualitative research. Computer programmes are now available to assist in the analysis of qualitative data, although the nature of qualitative analysis means that this always forms a major component of the research process.

Content analysis involved reading the full transcripts several times and identifying themes. Responses relating to a particular theme were then extracted from wherever they occurred in each transcript and broad categories of description or explanation were identified based on a careful reading of these responses. It was often found helpful in analysing the material to produce distributions of responses. However initial categories were generally modified as further responses were studied until a classification that appeared to satisfactorily describe and 'fit' the data emerged. In describing and analysing these categories reference was again made to the full transcript to place the statements in their original context and thus ensure that the meanings and implications derived reflected

those of the respondents. Patient responses were also always analysed for the three groups of White and Afro-Caribbean working class, and White middle class. Each of these groups was also examined for men and women separately.

Another strategy, often referred to as 'cognitive mapping', involved identifying the patterns of responses given by individual patients or doctors across several areas and hence making links between different elements. Themes in the patients' responses were also sometimes identified which posed questions for the analysis of general practitioners' transcripts. However the research was not designed to link the responses of individual patients and their general practitioner, as many patients may have seen several doctors over the course of their diagnosis and treatment.

Some qualitative research takes the form of purely ethnographic description, while other research follows the principles of inductive theory generation as outlined by Glaser and Strauss (1967). However much qualitative research, including the present studies, lie somewhere between these two extremes. Thus although primarily descriptive they have the further aim of developing broader explanations and conceptual categories from the data. Schutz (1964) referred to this as the development of 'second order constructs' of social actors comprehension of social reality. Such second order constructs require to retain a basic allegiance to the social actor's comprehension of the social world, or their 'typifications', but to move beyond the natural attitude which forms a fairly unreflective stance toward everyday life.

Generalisability and validity

Qualitative research is frequently criticised from a quantitative perspective for a lack of generalisability, since such studies are based on small numbers of people who are not selected to form a representative sample of a particular population. However whereas quantitative research frequently seeks to attach precise figures indicating the prevalence of a particular characteristic in the population and to identify significant associations,

the aim of qualitative research is to uncover what can be regarded as generalisable social meanings and processes through the in-depth study of particular situations or groups of people. The groups of patients and doctors interviewed in the present sample were therefore not selected to comprise random samples of a size sufficient to detect statistically significant differences but rather can be regarded as 'typical' of people in a similar social and patient category.

A further criticism of qualitative research relates to what is regarded as its greater subjectivity. This is regarded as a product of the close involvement of the interviewer in the research, with the way in which the interview is directed having a major influence on the data. Similarly, the process of content analysis and the selection of themes and illustrative material offers considerable scope for subjective interpretation and judgement. However the influence of the researcher's subjective beliefs and judgement is not unique to this form of research. All statistical data is necessarily based on someone's definition of what variables should be measured and how they should be measured and is therefore guided by subjective judgements and interpretations. However what is important in all research is neutrality, in that those involved are not predisposed to certain types of findings in terms of introducing a conscious bias. It is also important where possible to obtain some validation of the findings.

In qualitative research the main emphasis in terms of the validation is the validity of the second order constructs derived from the data to ensure that they accord with the beliefs and expectations of the groups being studied and thus have subjective validity in these terms. One approach is through 'triangulation which involves looking at things from more than one direction and hence requires that data are collected from multiple sources (Denzin, 1970). In this research the validity and hence generalisability of the findings regarding White and Afro-Caribbean working class hypertensive patients was tested by means of a postal survey undertaken among similar patient groups in different areas of London as an MSc project. These results provided confirmation of the main patterns of beliefs and

behaviours identified and the differences between ethnic groups (see Chapter 7). Another approach is to check the subjective validity of the meanings and explanations derived from the data through feeding this back to the study subjects and seeking their assessment of the validity of the interpretation. This form of validation was undertaken by presenting the findings to groups of general practitioners and also discussing them with Afro-Caribbeans to check that my interpretation 'made sense' to these groups, and that I had therefore represented their subjective validity. Several general practitioners later told me that their knowledge of Afro-Caribbean patients' beliefs and behaviours gained from this study had enabled them to 'open up' the consultation and discuss these issues. With this knowledge of patients' explanatory models and behaviours they felt able to move from the position of an 'outsider' unaware of their patients' beliefs and behaviours to an 'insider' who understands, although not necessarily shares, their patient's explanatory model.

Characteristics of patients

The Afro-Caribbean respondents were all born overseas and were thus first generation British, with all but three coming from Jamaica. They arrived in England between 1958 and 1964 as young adults and thus form part of the large immigration of people from the West Indies (particularly Jamaica and Barbados) who came in response to the employment opportunities in a period of labour shortage in the UK. Some were recruited directly by organisations such as London Transport and British Rail and others came to find jobs on the recommendations of relatives and friends. As such they were employed in manual jobs that had not been filled by white workers. This was made possible by what has been termed the *laissez faire* period of immigration between the end of the World War II and 1962 when there were no restrictions on residents of empire territories who wanted to work or settle in Britain.

Only three Afro-Caribbean respondents had lived in the Lambeth area for less than ten years, whereas over one-third (11/30) had initially settled in the area and lived there for twenty years or more (Table 3). The White working class people were all born in England

apart from three people who had come over 10 years ago from southern Ireland. The White respondents were again long-standing residents of Lambeth, with only six living there for under ten years. Altogether 16/30 had lived in Lambeth for 20 years or more, of whom one-half had lived in the area for their entire life (Appendix B).

All the Afro-Caribbean men were currently married and 9 of the 15 Afro-Caribbean women, although all were sharing a household with others (generally their children). Among the White respondents 9/15 men and 14/15 women were currently married, but none were living alone.

The occupational distribution of the White and Afro-Caribbean working class respondents was very similar and presented a picture of a fairly disadvantaged section of the population. About a quarter of the men in each group were not currently employed. Common occupations among the employed men were cleaner, caretaker, railway worker, general labourer and factory worker, with only small numbers being engaged in skilled trades such as foreman, plumber or mechanic. Most of the women were employed, although the Afro-Caribbean women were more often employed full time than their white counterparts (Table 3). The most common types of jobs undertaken by women either full or part time were clerical workers, cleaners, cashiers and shop assistants.

The housing occupied by two-thirds of each group of working class respondents was council rented accommodation and consisted mainly of council flats on large estates which is fairly characteristic of housing in Lambeth. The main difference in housing between ethnic groups was the rather larger numbers of Afro-Caribbeans who were owner-occupiers and correspondingly smaller numbers who were living in private rented housing (Table 3).

The social characteristics of the group of working class respondents thus identifies a geographically stable and relatively disadvantaged section of the population, with considerable similarity in the social circumstances of the two ethnic groups. The Afro-

Caribbean respondents had spent their early years in the Caribbean and had therefore experienced a culture that was strongly influenced and shaped by the White and predominately British colonial settlers and involved a common language, religion, educational system and dress, as well as a common affinity with Britain as the 'mother' country (Goulbourne, 1991). They had then spent over 20 years living and working in the London area in an ethnically mixed environment. Thus as a group they are characterised by a high degree of integration and assimilation. However this generation still regards the West Indies as 'home' and often eat traditional foods, such as salt fish and yams, and maintain other aspects of their culture in terms of forms of church worship and music, etc. Their social environment and culture thus reflects an amalgam of their Afro-Caribbean traditions and style of life with the dominant values and institutions in Britain.

The group of 16 White middle class hypertensive patients formed part of a relatively affluent stratum. All the male respondents (and the husbands of the married women respondents) held professional or managerial positions, such as veterinary surgeons, architect, company secretary, owner of a marketing company, owner of a travel agency, and managing director of a sports club. The women respondents were all economically active but mainly held a part-time job, often of a secretarial nature. All the middle class respondents were owner occupiers with the one exception of a person who held a controlled tenancy on a four bedroomed detached house. They were also more geographically mobile. Only one-quarter had lived in the local area for 20 years or more compared with one-half of the white working class respondents, and none of the middle class respondents had lived in the local area for their entire life. This small group of middle class respondents therefore provides a marked contrast to the initial group of working class people in terms of their socio-economic circumstances and material conditions of life.

Characteristics of general practitioners

The 21 general practitioners interviewed in Lambeth worked in 15 practices and comprised one-third of the doctors in these practices (Table 4). The size of practices showed that six

were single-handed general practitioners, three were working with only one other doctor, and 13 were in larger practices with up to six general practitioners. The considerable number of single-handed practitioners interviewed reflects the general situation in inner London where over 40% of general practitioners are single-handed compared with an average of 15% in the whole country (Fry, 1983).

The general practitioners consisted of 17 men and 4 women. They ranged in age from 29 to 62 years, with the majority being 45 years and over. Four had qualified overseas, three in Ceylon and one in Pakistan. Ten of the 21 general practitioners had the postgraduate qualification MRCP (Table 4).

The single-handed general practitioners comprised one woman who had qualified in Ceylon, and 5 men of whom one had qualified in Ceylon, one in Pakistan and three in the UK. The other general practitioner who had qualified in Ceylon was working in a two-partner practice. The 4 general practitioners who had qualified overseas were thus all located in single-handed or two doctor practices. Only 1 single handed general practitioner had his MRCP (Appendix B). The single-handed practitioners are thus a distinctive group, with the concentration of doctors qualifying overseas possibly reflecting their greater difficulty in joining practices.

The 15 practices in the study were accommodated in a mixture of purpose-built premises, converted houses, and premises on the ground floor of council flats. These practices differed greatly in the quality of their waiting rooms and other facilities, as well as in the support staff employed and range of services provided. List sizes ranged from 1,700 to 3,500 patients per doctor, with the majority having about 2,000 patients. The practices were thus fairly diverse but represent a mix that can be regarded as typical of inner London.

Nearly all the general practitioners thought that at least 20% of their patients were from ethnic minorities and some put the figure as high as 60%. In 5 of the 15 practices nearly all

patients from ethnic minorities were Afro-Caribbean. In the other practices there was a more diverse ethnic mix which included considerable numbers of Asian and West African as well as Afro-Caribbean patients.

Presentation of findings

The following three chapters present data relating to these groups of patients and doctors regarding their beliefs about high blood pressure, the psychosocial impact of this condition, and peoples' use of the prescribed drugs and other remedies to control their blood pressure. The main emphasis is to describe the themes emerging from patients' and doctors' accounts and the links between beliefs and behaviours. The excerpts from respondents' accounts are selected as typical examples of a particular theme. The respondent number refers to that listed in Appendix B, with the abbreviations WC (Working class White), AC (Afro-Caribbean Working class) and MC (Middle class). Although sometimes referred to as 'patients' this is merely to distinguish them from the general practitioner respondents.

There is no attempt at precise quantification and generalisation in statistical terms. However the tables in Appendix A provide an indication of the distribution of responses based on categories that emerged from the data, with the aim of locating discussions of particular themes within this broader context.

Chapter 4

MEANINGS AND CAUSES OF HYPERTENSION

This chapter examines aspects of both patients' and doctors' views of the nature and causes of hypertension. It first explores patients' understanding of the terms high blood pressure and hypertension and examines doctors' diagnosis of hypertension and thresholds for drug treatment. It then considers the views of each group regarding the 'causes' of this condition and examines doctors' awareness of patients' beliefs and concerns.

Patients understanding of 'hypertension' and high blood pressure

The term high blood pressure was generally used in the interviews. However respondents were asked if they had heard the word 'hypertension' and if they knew what it meant. Only about one-half of both White and Afro-Caribbean working class respondents recognised that high blood pressure and hypertension were the same thing. About one-third of these groups said they did not know the meaning of hypertension at all, although most acknowledged that they had heard the term. In contrast to this fairly limited understanding of the term 'hypertension' among working class respondents, nearly all the middle class respondents were aware that hypertension and high blood pressure were the same. A third type of response given by 11/60 working class and 2/16 middle class people was to define hypertension in terms of stress, worry or tension. Further questioning indicated that nine of these thirteen people regarded high blood pressure and hypertension as distinct. Typical descriptions given by these nine respondents were:

'I've heard people say that they've got hypertension which means that they're highly stressed. Nobody has ever spoken to me and said that I've got hypertension.'

('Have you ever heard hypertension linked with high blood pressure?')

'No, I don't see them linked together.' (WC 19)

(Meaning of hypertension) 'Yes, being overactive.'

('Have you ever heard it linked with blood pressure?')

'No.' (WC 12)

(Meaning of hypertension) 'Well, maybe that you are getting in a temper, you've lost your temper, that sort of thing.'

('Is this linked with blood pressure?')

'I don't think so, its something different, getting in a temper and all worked up.'
(AC 26)

Whereas nine of the 13 respondents who defined hypertension in terms of stress, worries or tension regarded hypertension and high blood pressure as distinct, the other four respondents described hypertension as something that could contribute to high blood pressure. These people generally seemed to be concerned with the effects of 'hyper-tension' in producing rises in blood pressure.

'I don't really know but I think it's (hypertension) to do with getting worked up which isn't any good for the pressure.' (WC 15)

'Yes you get vexed over something, and it (hypertension) push it (blood pressure) right up.' (AC 30)

'Oh that's nervous problems or troubles of the mind.'

('Do you see it as linked to high blood pressure?')

'Well its the things that can bring it on and build it up.' (AC 31)

'When you get anxious and then that can cause your blood pressure (58) to go right up.' (AC 58)

This examination of the meaning of the term 'hypertension' therefore identifies a lack of familiarity with the word among people in the manual occupational groups with only one-

half being aware that it was another term for high blood pressure. The others either did not volunteer any definition or defined hypertension in terms of stress, worry and tension, with most regarding this as completely separate from high blood pressure. These meanings might not become apparent in a structured interview or closed-style of medical consultation and identify considerable scope for confusion and lack of understanding if the word 'hypertension' is used. However the general practitioners said they rarely used the term hypertension and usually explained to patients that their blood pressure was 'elevated' or 'slightly raised'.

Patients' understanding of the mechanisms of high blood pressure was explored by asking, 'what do you think happens in your body when you have high blood pressure?' The working class respondents appeared to feel uncomfortable at being asked this and were generally unwilling to say much and keen to move on to something else they knew more about. Overall 23/60 did not attempt to answer this question. Working class women were especially reluctant to volunteer any suggestions of what might be happening, with one-half of the working class women saying they just did not know compared with only about one quarter (8/30) of the working class men. Secondly, the women who did attempt an explanation tended to identify a single cause, such as 'the blood not circulating properly', whereas the men were more likely to provide a fuller explanation linking several factors together. This difference in the pattern of responses of working class men and women was characteristic of both the White and Afro-Caribbean patients.

The physiological processes cited by the working class respondents mainly consisted of problems of the heart being under strain or pumping too fast which was mentioned by 15 men and 5 women, and problems of the blood not circulating properly mentioned by 9 men and 9 women. The latter was generally seen as a problem of the blood 'rushing around too fast', although three Afro-Caribbean respondents perceived the problem as being that their blood was too thick, which meant that 'it doesn't circulate properly'. Sometimes these circulation problems were linked to the effect of making the heart pump faster. The other

link cited was the effects of a malfunctioning of the arteries in putting the heart under greater pressure:

'If the arteries are not doing their job properly, then the heart has to work too hard and then because it is a cycle, the heart works harder to push the blood around.' (AC 49)

'Well I suppose the old heart pumps away like mad, 'cos the vessels get narrower and it has to pump a bit harder to get the blood around.' (WC 34)

The middle class respondents were more likely to identify an underlying mechanism of high blood pressure, with only 3/16 saying that they couldn't explain what happens in words. They also more often attempted to link different aspects, in terms of the pressure put on the heart by the blood either flowing too fast or the increased pressure on the heart caused by a restriction of the arteries. Most people again gave the impression that they felt on unfamiliar ground in this area, although there was no difference in the responses of men and women among middle class respondents.

There thus appears to be considerable uncertainty among all groups of patients about the underlying mechanisms of high blood pressure, although this uncertainty is rather greater among the working class than middle class respondents. Working class women were also more reluctant than the working class men to try and explain the mechanisms involved in high blood pressure which may reflect differences in cultural responses to limitations in knowledge, with the women being more reluctant to reveal a lack of knowledge or give what may be an incorrect explanation.

The fairly limited understanding of the mechanisms of high blood pressure among patients is not surprising since general practitioners said they did not explain anything much about this to patients. Patients also frequently described this aspect as something technical which was in the doctor's sphere rather than their own, thus drawing attention to a

perceived divide in terms of the appropriate knowledge and spheres of expertise of each group.

The picture that emerges is thus of fairly limited patient knowledge about the meaning of hypertension and mechanisms of high blood pressure, and especially among working class patients. This in turn is associated with general practitioners belief that it is not necessary to discuss these things with patients and with a corresponding acceptance among many patients that these were distinctly professional medical matters, with this view at least serving to explain their lack of knowledge.

Doctor's diagnosis and treatment thresholds

General practitioners were asked what alerted them to the possibility of high blood pressure when their patients present. They identified overweight or a sudden change in weight as the main symptoms, with a few also mentioning shortness of breath. They also frequently noted that black people (Afro-Caribbean or African) were at greater risk in view of their higher incidence of hypertension and would generally check their blood pressure more readily. Other characteristics mentioned as relevant were age, a family history of stroke and heavy smokers. The general practitioners were also specifically asked if they thought that presenting with a headache was a symptom. Six of the 21 doctors agreed that a headache could be a symptom of essential hypertension. The others said that they themselves did not think that headaches and blood pressure were linked, but that their patients frequently present with a headache and want their blood pressure checked:

'I think that when they present with headaches all patients expect you to take their blood pressure. They talk about it and sometimes if they say they are worried about blood pressure they say that they have headaches or giddiness... Every patient with a headache I always take their blood pressure, just for my needs as well as theirs.'

('Do you regard headaches as a symptom of hypertension?')

'Not really, not essentially, but on the other hand it is surprising how many people who are hypertensive still complain of headaches. I haven't picked

up anyone who came with a headache as hypertensive, no.' (GP 01)

'They all come in with a headache and think that it is their blood pressure. No doctor isn't going to take their blood pressure in that situation, but I don't think that it is actually statistically significant... If they complain of a headache or any such symptoms one is going to take their blood pressure. Occasionally you do find they have hypertension for the first time but it may be chance I think.' (GP 07)

This illustrates a situation in which general practitioners are aware of a widely held belief among patients, and although not necessarily endorsing this view themselves nevertheless fulfil patients' expectations. In so doing their role corresponds to the guidance-cooperation model of the doctor-patient relationship, with the doctor cooperating with patients' expectations (Freidson, 1970). However for general practitioners this action is also perceived as having important benefits in reassuring the patient, and several commented on the way in which this served to fulfil their ideas of good practice:

'If they have headaches, they will ask me to take their blood pressure because the general public feel that headaches are related to hypertension. I take it because I don't take the blood pressure often enough anyway, so I'm always glad to have an excuse.' (GP 17)

Furthermore, although not necessarily accepting a link between headaches and hypertension, checking patients' blood pressure can be seen as worthwhile in terms of the chance of discovering cases of high blood pressure:

'If a person complains of a headache they usually expect to have their blood pressure taken, so you usually take their blood pressure, so I suppose headaches do sometimes lead to diagnosing hypertension.' (GP 18)

The checking of blood pressure in response to patients' expectations is thus seen as performing a number of important functions within the consultation, including the

reassurance of patients and contribution to a positive doctor-patient relationship, the fulfilment of what many general practitioners regard as good practice in terms of the routine recording of blood pressures, and on occasions the diagnosis of hypertension.

Another important issue in terms of the numbers of people labelled as 'hypertensive' or 'suffering' from blood pressure problems relates to general practitioners threshold for drug therapy. Among the present group of 21 general practitioners there was one GP (20) running a single handed practice who did not diagnose and treat essential hypertension himself but instead always referred patients to the hospital. He justified this practice in several ways. This included what he perceived as the London hospitals being short of patients and glad of the work, his patients liking to go to hospital and being grateful for a referral, and his wish to avoid any possibility of charges of medical negligence. The other 20 general practitioners described their usual treatment routine. This generally included statements regarding the importance of taking readings on three separate occasions prior to beginning drug therapy, unless the pressure was extremely high. Most also mentioned that they checked for signs of secondary hypertension, although only a couple of general practitioners said that they routinely did an ECG, chest x-ray, urine test or other procedures for patients diagnosed as having an elevated blood pressure.

In describing their threshold for drug therapy a distinction was generally made between different age groups, with higher thresholds being adopted for elderly patients compared with patients in their 40s and 50s. However there was considerable variability in the pressure at which they normally began drug treatment. For patients aged in their 40s and 50s, six of the 21 general practitioners said they would begin treatment at under 95mm Hg diastolic, nine general practitioners employed thresholds in the range 95-104mm Hg diastolic and five general practitioners would not begin drug therapy until 105mm Hg diastolic or over. For patients aged in their 60s, general practitioners frequently referred to the importance of also taking account of the systolic pressure. However in terms of the diastolic pressure half the general practitioners would generally not begin treatment until

105mm Hg or above in this age group, with several giving a threshold of 110 or over. As might be expected, there was a consistency of approach across ages. For example the six general practitioners who employed a threshold of below 95 for the younger age group also employed a relatively low threshold for the elderly and generally treated at pressures of under 105 diastolic in this age group.

A characteristic of general practitioners employing a relatively low blood pressure threshold for beginning drug therapy was that they tended to regard this as a fairly fixed threshold and did not take much account of the influence of other risk factors. As the following general practitioners explained:

'For a 40 year old so long as the diastolic pressure is between 80-85 and above, then they require treatment. For elderly people it could be about 100 before I would begin treatment.' (GP 11)

'I would treat above 130/90, except for elderly patients who I would treat if they were over 100.' (GP 13)

'I treat everybody with a diastolic pressure in excess of 90 diastolic.'

('No matter what the age?')

'Yes, that's right. I think a diastolic of 90 is compatible even in quite old people, with maintaining coronary flow and cerebral flow ... if it's above 90 I get worried.' (GP 19)

General practitioners who did not begin drug therapy until higher blood pressure levels described a much more flexible approach and generally emphasized how they initially tried to control blood pressure through non-drug treatments, such as weight control and advising about salt intake, alcohol and smoking. They also frequently considered other risk factors besides blood pressure in treatment decisions:

'The last time we discussed this we decided it was 180/105. However I'm reluctant to embark on treatment unless I have to. I don't have a fixed cut-off point as such but tend to weigh everything together. In that sense I look at the

risk factors. They are as I understand it, cigarette smoking, family history of heart disease, obesity, blood sugar and cholesterol ... If somebody has parents who died young, smokes 30 cigarettes a day, is overweight, diabetic and has a high cholesterol level, I would treat them quickly at a lower level. If on the other hand somebody is thin and active, takes lots of exercise, doesn't smoke, blood sugar is normal, cholesterol is normal, parents lived into their 90s, then weighing it all up, I am much less likely to treat. So you can't really say this level and that level you treat. You try and make an assessment for each individual patient.'

(GP 06)

This general practitioner went on to explain about the importance of the patient's view:

'If the patient is reluctant to be treated and I think they need treatment, then I would be more likely to go along with them to persuade them and educate them and wait until such time as they are ready for it, rather than slightly browbeat them into treatment and then find that they come every 6 months but I have been giving them a 3 monthly supply of tablets and they say they have plenty of tablets. You end up in a slight farce where the patient isn't taking the treatment but won't tell the doctor, and the doctor feels he can't confront the patient, so he takes their blood pressure and gives the tablets. There is a kind of uneasy truce between the two sides and I don't like that.'

Other general practitioners explained:

'Well, I have come to tolerate slightly higher and higher levels before I actually put them on drug therapy, mainly because of the two big studies that have been done recently. They show that you are not doing an awful lot of good by putting mild to moderate hypertension on long term treatment with side effects, patient compliance, and so on. Sometimes I just keep an eye on them and hopefully educate them about the things they can do to try and stop it rising. Then I also will take into consideration how many other risk factors they have got At the age of 45-50, I would probably treat at 160/105. As they get older I tolerate more and more. At the age of 65, I probably wouldn't treat under 170 or 175/105, that sort of level. At 80 years, I would hardly ever treat unless it was 250/150.'

(GP 07)

'I treat (patients aged 40's and 50's) if their pressure is over 110, or possibly 105 for women. However I would say that I intervene less frequently now, since

the report (MRC) really didn't show any dramatic impact of hypertensive treatment and it showed huge disadvantages and side effects. It also showed how important smoking is as a risk factor, so I tend to have a broader approach now and interfere less often. I used to treat at 100 before.' (GP 10)

These accounts illustrate themes that were common among general practitioners with higher thresholds for treatment. These were their emphasis on considering a patients' overall risk factors and their reference to evidence from the MRC trial (MRC Working Party, 1985) that hypertensive treatment benefitted relatively small numbers of people and often produced side-effects. This evidence had frequently caused them to raise their threshold for beginning drug treatment and to place more emphasis on weight control, smoking and other non-pharmacological approaches.

In contrast, most general practitioners with a low threshold for beginning drug treatment (ie. under 95mm Hg diastolic) appeared to think in terms of fairly rigid divisions between pressures requiring or not requiring treatment and said they had not changed their threshold. Just one general practitioner who currently prescribed drugs at pressures of 160/95 said he had dropped his threshold from around 110 diastolic. He explained that this was because he did a lot of blood pressure checks for insurance examinations, and 'when you do insurance examinations you have to put down that a man is at risk if his BP is more than 140/90. This tends to influence your outlook.'

The question of the drugs prescribed to control blood pressure was not examined in detail. However most general practitioners said that over time they had made some changes in the type of drugs they used. There also appeared to be differences in prescribing strategies, including whether they adopted a stepped approach of beginning with a diuretic and then adding a beta blocker if required, or used a single drug, including the newer calcium channel blockers.

There is thus considerable variability among general practitioners in their identification of high blood pressure and thresholds for drug therapy. However very broadly there appear to be two groups. One group comprises doctors with a low and relatively rigid threshold for beginning drug treatment, while the other group adopt a much higher and more flexible threshold and rarely prescribe drug treatment at under 105mm Hg diastolic for patients in their 40's and 50's, as well as taking greater account of the presence of other risk factors in treatment decisions. It appeared that this latter group had often raised their thresholds for treatment as a result of evidence from the MRC trial of mild hypertension, whereas those with a lower threshold had maintained earlier practices.

It was not possible with the fairly small numbers of doctors interviewed to establish whether any particular characteristics of doctors and their practices were associated with differences in thresholds or approaches to treating high blood pressure. However no obvious patterns emerged. For example the single-handed practitioners included doctors who adopted a range of thresholds and could not therefore be distinguished from doctors in larger practices. However what was evident is the existence of substantial differences in thresholds and forms of drug treatment, which has important implications for the total number of people defined as requiring or receiving regular drug therapy for hypertension in a general practice setting.

Perceived 'causes' of high blood pressure

Studies of people with chronic conditions suggest that they experience a need to identify a cause of their problems, even in the face of medical uncertainty, with this serving to render their condition intelligible. Williams and Wood (1986) thus describe beliefs about aetiology as part of a broader interpretive process of narrative reconstruction, with the purpose of identifying a 'cause' being not just causal analysis but rather the reconstruction of a sensible story to account for what has happened to them.

As Giddens (1979) asserts, 'in lay thought cause and meaning frequently coincide' and therefore as Bury (1982) explains, 'the search for the cause of illness (is at) one and the same time a search for its meaning'. Among the present respondents the majority of people in each group were able to identify a cause of their high blood pressure, with this mainly being a single cause. The proportion identifying a cause was however rather higher among the Afro-Caribbean respondents (24/30) compared with the groups of White working class (17/30) and middle class (11/16) respondents. Those not identifying a cause all acknowledged that they had wondered about this. Some felt that the possible causes that they were aware of, such as a family history, or stress or overweight, did not apply to them. Others stated that no-one knew the causes, not even doctors, and so they could not be expected to know. The ability of quite a large number of respondents to tolerate this uncertainty and not identify any particular cause of their own high blood pressure may be helped by the fact that this condition did not restrict their general activities or form a central feature of their lives, and in this way forms an important contrast to the situation of patients with severe rheumatoid arthritis or other disabling conditions.

The cause of their blood pressure problems most commonly identified by all groups was 'stress, worry or tension' (Table 7). This appeared to involve two rather different concepts. A few White respondents (predominately women) in both social classes attributed their high blood pressure to being a 'worrier', whereas this was not mentioned by the Afro-Caribbean respondents. This notion of being a 'worrier' corresponds with the ideas in the scientific literature of the importance of particular personality traits in high blood pressure. It was explained by respondents in the following terms:

'I think I get worked up very easily. Just worry about things and live on my nerves. It could be that.' (WC 51)

'It might be that I am an anxious, intense sort of impatient, bustling type of person. I rarely relax.' (MC 73)

For other respondents their stress and worry was linked to specific events or situations which they viewed as triggering their high blood pressure. These can be broadly divided into personal or family-related problems, and work-related problems, corresponding to Blumhagen's (1980) concepts of chronic internal stress and chronic external stress. Family problems as a cause of high blood pressure were more frequently mentioned by Afro-Caribbean women and arose from problems in their relationship with a spouse or child, problems regarding finances or housing, and the illness or other misfortune of a family member:

'I think it was too much strain, because my husband wasn't all that cooperative and I think that's what brought it (high BP) on ... My husband left everything to me, pay the bills and do everything and I think that's what caused it. My blood pressure has been much better now for the last couple of years. That's since the divorce.' (AC 35)

'I don't know but back then I was a bit worried because one of the older girls gave me problems. She packed her bags and left one day when she was only I was so worried. I didn't know where she went. I went to the Welfare but they couldn't help me. They said she's old enough to take care of herself. I was so worried. That might have caused it.' (AC 18)

'Well I think its my home life and things like that. There have been lots of problems you see, problems with my wife's health (psychiatric problems). Sometimes she takes quite bad and its been really difficult.' (AC 54)

Other personal stresses perceived as causes of their high BP included the difficulties mentioned by one Afro-Caribbean woman of 'fitting into life in England', and the worry experienced by another woman as a result of her hair falling out following a perm that led to a situation in which 'my blood pressure went up and it never came down again'.

Stresses associated with work involved pressures of the job, problems of inter-personal relationships at work, and problems of unemployment. These work related stresses were

mentioned by men in all social groups and by two middle class women. As one man who was currently employed as a driver explained:

'I was under a lot of pressure at the time, being out of work for 9 months. I couldn't get a job. I applied for plenty of jobs and know plenty of people at the council and various other places and yet I couldn't get one. That helped to build it up (high BP). That could be the reason I got this blood pressure problem.' (AC 01)

Similarly, a factory foreman explained:

'With the job that I'm doing, its pretty hectic because you have to supervise your own people. You get a lot of hassle from that, you try to keep calm but its not easy if you are supervising 30 people and everybody calling you at the one time. It's stressful. I think that helped raise my blood pressure.' (AC 22)

Middle class respondents also identified problems of work-related stress:

'At the time we were running a very stressful business. We had three shops and I found it very difficult to relax. I think that really caused it.' (MC 66)

'I do get aggravations at work (Accountancy). I think maybe that has something to do with it.' (MC 69)

Another cause of high blood pressure identified by all groups of respondents were familial and hereditary factors. Some talked in general about genetic factors as a possible cause, although more commonly people identified their own relatives with high blood pressure, particularly their parents and said that they thought they had inherited the same problem.

Diet, smoking, alcohol and overweight were identified by some working class respondents as causes of their own high blood pressure. In particular the Afro-Caribbean respondents placed considerable emphasis on diet, in terms of too much salt or fat, and particularly too much starchy food such as yams.

The small number identifying 'other causes' of their own high blood pressure were women who regarded the contraceptive pill, and in one case slimming tablets, as the cause.

When respondents were asked what they thought were the causes of high blood pressure 'in general', they frequently identified factors in addition to those which they regarded as causing their own high blood pressure (Table 7). It is interesting to note that some people identified stress as a possible cause of high blood pressure in general, although not feeling that this applied to their own high blood pressure. The main additional factors cited by the working class respondents were diet and overweight, whereas middle class respondents cited several aspects of life style as additional factors including diet, overweight, smoking and alcohol. Questions regarding the causes of high BP 'in general' can be regarded as reflecting people's stock of knowledge from which their explanations of the causes of their own high blood pressure are drawn, based on their examination of their familial and biographical experiences. It is thus not surprising that this question produced a larger number of suggested causes, as well as a greater number of people identifying a cause.

Patients' views of the causes of high blood pressure thus differ from the professional model as represented in clinical texts in their emphasis on stress and worry, both in terms of their own high blood pressure and blood pressure more generally. This formed a common feature of beliefs across gender, ethnic and socio-economic groups. However the emphasis on stress as a cause was most common among the Afro-Caribbean respondents. This may reflect differences in their views of the causes of ill health, or particular aspects of their life circumstances as an ethnic minority removed from their wider kin and early environment. The importance assigned to stress as a cause of hypertension has also been reported in a number of other studies of the lay population. Blumhagen (1980) in a study of men attending a hypertension clinic in Seattle found that 49% identified external stresses and 14% identified internal stresses in terms of psychological, family or interpersonal problems as the initial causes of their condition, with acute stresses causing exacerbations of the

condition. Similarly, the Health and Lifestyle Survey (HLS) based on a national sample of 9003 people aged 18 years and over in England, Wales and Scotland, found that overall 54% of men and 53% of women suggested that worry, stress or tension was a cause of high blood pressure, and was by far the most common cause suggested. There was also little difference in the emphasis given to stress as a cause by people treated for hypertension, borderline or untreated hypertensives, and normotensives. Following stress the next most common causes of high blood pressure identified in HLS were diet (mentioned by 13% men and 10% women) and overweight (mentioned by 11% men and 15% women) (Cox et al, 1987).

General practitioners were also asked their views regarding the causes of high blood pressure. It is however difficult to be certain of the precise status of general practitioners' responses, which may reflect a mixture of their personal accounts and their public accounts or more formal knowledge. It is also recognised that doctors and patients may hold differing views of the notion of 'cause', which is a term applied to various points of the causal sequence and to both direct and intermediary factors. When asked their views nearly one-half (9/21) of the general practitioners stated that 'nobody knows' the causes of high blood pressure and left it there. Those who did volunteer a cause were more likely than patients to identify more than one cause. The three causes most frequently mentioned were stress, worry or tension, familial/hereditary factors, and overweight (Table 8). The numbers identifying hereditary and dietary factors were however rather less than would be expected in terms of the expert models conveyed in clinical texts which give greatest emphasis to these causes (Chapter 1).

The identification of stress as a cause was often justified by doctors in terms of the evidence of relaxation in controlling blood pressure:

'Stress is probably a significant cause. It has been shown that if you reduce stress by non-medical causes it is often a way of reducing hypertension.' (Also identified genetic factors and obesity as possible causes). (GP 02)

'Personally I feel that stress is a very important factor, as it has been shown

that stress reduction can reduce blood pressure ... We know that when people are stressed or tense their blood pressure does go up and so it seems natural that if somebody has a chronic ongoing stress in their life that it will contribute to their hypertension. Yes I do believe that. It's more of a feeling than a factual thing and I don't know if there is much evidence to back it up.' (Also mentioned obesity, smoking and genetic factors as possible causes). (GP 06)

'Stress in modern society is one of the main causes.' (Also mentioned salt).

(GP 11)

The model that was employed by GPs therefore often appeared to regard stressful life circumstances as exacerbating a patient's high blood pressure and increasing susceptibility, rather than viewing this as the sole or immediate cause. In particular, several doctors acknowledged the possible contribution of stress in increasing vulnerability or exacerbating blood pressure problems but did not cite this as a cause because they interpreted 'cause' in terms of a specific aetiology model of disease. This is illustrated by the following GP who identified genetic factors as the cause of high blood pressure:

'There is no doubt that for somebody who is genetically susceptible, stress can make it worse. I treat some of my hypertensives with relaxation tapes. I'm sure you can adjust the blood pressure levels by anti-stress techniques but I'm not sure that stress is the cause of hypertension.' (GP 17)

General practitioners' beliefs regarding the causes of high blood pressure thus reflect the uncertainties surrounding this condition, with many not providing any explanation. However among those who did identify a cause there was a greater emphasis on stress and rather less emphasis on familial and dietary factors than might be expected from the clinical texts. Their emphasis on stress as a cause may reflect the influence of patients' beliefs and of broader lay theories and societal views regarding the role of stress as a cause of ill health as well as the direct influence of the scientific literature. However it is important to note that despite what appears to be a shared emphasis by patients and general practitioners on the importance of stress, the notion of stress that was employed by doctors suggests that this was often perceived as a vulnerability or exacerbating factor,

rather than as patients appeared to perceive it in terms of a direct (often single) cause of high blood pressure. This draws attention to the differing meanings and models of the 'causes' of disease that may be held by the lay person and general practitioner and hence of forms of explanation, although each may evoke the concept of 'stress' which is itself subject to varying definitions and theories of its role in disease causation (Vingerhoets and Marcelissen, 1988).

Given that there was some difference between patient and practitioners' views of the causes of high blood pressure, there is a further question of how aware are general practitioners of patients' beliefs in terms of the broad categories of 'causes' identified. As Table 8 shows, many general practitioners were aware that patients regarded tension, worry or stress as a cause, although not necessarily endorsing this view themselves. As one general practitioner who was classified as not knowing the cause of hypertension explained in relation to his patients:

'I've got blood pressure because I've got blood pressure. It's not human nature to accept that very easily and considering that most people are under some sort of stress at some time or other it is not surprising that they will make the judgement. People with high blood pressure do look around for some way of explaining it.'

(GP 05)

Other GPs similarly expressed definite ideas regarding patients views:

'I think that they think stress is an important cause - tension and grief situations. I think that some of them also recognise that it is hereditary. Patients always like to attribute something to some event if possible. That then ties it up in their mind as a cause and effect.' (Own view that high blood pressure associated with genetic factors). (GP 18)

'They sometimes think that it is worry in their lives, stress at work both physical and psychological. They sometimes associate family history if

someone in their family has had blood pressure or a stroke or heart attack.'

(Own view that high blood pressure due to genetic factors and overweight). (GP 21)

Some GPs went on to comment that they thought that their Afro-Caribbean patients were under particular stresses, which may reflect these patients' own feelings (see Table 7). As these GPs explained:

'I know people tend to think of the Afro-Caribbeans as happy, going to carnivals and dances, but they do seem to have quite a lot of burdens in life. For the Caucasians their burdens are in many ways lighter by living among their people in their own country.' (GP 13)

'I think most people think it is due to worry or pressure. In fact some of my patients are dying to get back to Jamaica or Barbados. They feel as if they are living in stress here all the time.' (GP 07)

There was no necessary correspondence between general practitioners' own views and what they thought were their patients' beliefs about the causes of their high blood pressure. For example, only three of the 12 general practitioners who thought their patients viewed stress, worry or tension as a cause personally endorsed this and themselves identified stress as a cause. Doctors who were classified as not knowing the cause themselves also often had views as to what their patients felt.

Several doctors in the study commented that they talked to their hypertensive patients about stress and some recommended relaxation as a way of reducing stress. For example one GP (06) who personally felt that stress was a very important factor causing high blood pressure explained:

'I talk about stress and I try and help them to identify the stress points in their life and try and encourage them to do something about it. Unfortunately it is easier said than done. Most people know which are the stress factors and they say they can't do anything about that. They can't do anything about their son or their awful wife or awful boss. They reckon they are impotent and can't make any changes.'

Similarly, one GP (13) who regarded his Afro-Caribbean patients as particularly likely to experience stress explained:

'Some of them I've been able to help get the pressure down with a certain amount of advice and discussing their problem and how to avoid getting stressed.'

Another GP (17) who although endorsing a genetic theory himself explained:

'I treat some of my hypertensives with relaxation tapes. I am sure you can adjust the blood pressure level by anti-stress techniques, although I'm not convinced that stress is the sole cause of hypertension.'

This points to the ways in which doctors' advice and recommendations may influence patients' beliefs. This was supported by patients' descriptions of the questions asked by doctors. About one third of patients in each group said that their doctor had made some enquiries or given possible explanations of the cause of their high blood pressure, with this mainly involving discussions about stress and worry, or about possible hereditary factors. However it is interesting to note that this did not always influence patients views, with several people reporting that although their doctor had asked whether they were having any particular problems they could not think of anything, and so did not necessarily identify this as a cause.

This brief analysis of beliefs regarding the causes of high blood pressure thus suggests that despite the clinical uncertainties, many patients had identified a cause of their own high blood pressure and often appeared to have selected what they perceived as the most relevant factor from among their knowledge of the possible causes of high blood pressure 'in general'. However compared with other chronic conditions a larger proportion appeared to be tolerating a situation of uncertainty and had not identified a cause of their own high blood pressure. This may occur because hypertension does not have a major impact on their life and therefore does not require an explanation of its causes and the answering of the

question 'why me', in the same way as severe arthritis or other disabling conditions. In terms of the nature of the causes identified, a major role was ascribed by patients to worry, stress and tension in both this and other studies of hypertension. For some patients the effects of stress have been suggested by their general practitioner through the questions they were asked when their high blood pressure was diagnosed and the advice they were given about ways of controlling their blood pressure. The effects of stress in producing temporary elevations in blood pressure may also have contributed to its identification as a cause of their long term problems. In addition, for a few people the term 'hypertension' may itself have conveyed this meaning, although most people thought of their condition in terms of high blood pressure rather than hypertension.

More generally, this examination of some aspects of lay and practitioners beliefs regarding the nature of hypertension has drawn attention both to the variability that exists within both groups and has identified some of the ways in which patients' and practitioners' views interact. Examples of the latter include both the influence of patients' expectations that their blood pressure should be checked if they present with a headache on doctors' beliefs and behaviours, and the effects of the questions asked and recommendations made by doctors in contributing to patients' beliefs in stress, worry and tension as a 'cause' of high blood pressure.

Chapter 5

THE IMPACT OF HYPERTENSION

This chapter first describes the circumstances in which respondents were diagnosed as having blood pressure problems and their initial feelings and responses to this diagnosis. It then examines the current impact of 'high' blood pressure in psychological and behavioural terms and shows that many patients experience some worry or changes in their pace of life, due both to the meaning of this condition and their experience of symptoms, although these have little effect on their major social roles. Finally the ways in which general practitioners may both directly or indirectly influence the meanings of this condition for patients and hence promote or reduce its psychosocial impact are considered.

Reactions to initial diagnosis

A key stage in patients' experience of illness is the formal medical diagnosis or 'labelling', which in the case of hypertension officially puts them in an 'at risk' category. For just over one-half of the middle class respondents and two-thirds of the working class respondents this had occurred during an ordinary general practice consultation, and especially when presenting with symptoms of giddiness, dizziness, swollen ankles, tiredness or headaches. Other people had learned of their high blood pressure during a routine medical check. For men this mainly involved a medical undertaken for life assurance or work-related purposes, whereas for women problems of high blood pressure were more often identified in relation to the prescribing of contraceptive pills or during pregnancy. Blood pressure during pregnancy is regarded as a distinct condition and does not necessarily lead to long-term blood pressure problems. Thus few of the women who were diagnosed as having high blood

pressure during pregnancy had been taking medication continuously since then but nevertheless identified this as the origin of their current blood pressure problems.

The diagnosis of high blood pressure had occurred between 1 and 24 years ago, with a mean of 4.4 years for men and 8.3 years for women. Whereas for most people this diagnosis had been made less than 10 years ago, five men and sixteen women had been aware of their high blood pressure for over ten years, with this group including the majority of women who identified pregnancy as the beginning of their blood pressure problems.

There was a range of reactions to the initial diagnosis (Table 9). A small group of people described themselves as feeling 'very worried', 'shattered' or 'very upset' on hearing that they had blood pressure problems. These people were all aged in their early forties or younger at the time and had learned of their high blood pressure during a routine medical check. Their initial expressions of shock partly occurred because the diagnosis was so unexpected. These respondents also appeared to have all been aware of the significance of blood pressure in terms of the increased risks of a heart attack or stroke, with this awareness often being associated with the death of a close relative from these problems. This initial response of shock and fear is illustrated by the following people who when asked how they felt when the doctor told them they had high blood pressure explained:

'Shattered'

('Why were you so shattered, what did it mean to you?')

Well, it runs in the family and I know what high blood pressure can mean to people'

('What can it mean to them?')

'Well, strokes and other illnesses'

(Resp. 72, middle class woman diagnosed at
Family planning clinic

'Bloody scared, for the simple reason my mother had high blood pressure and she died from a heart attack. That did frighten me. There was no pains, just this funny idea in my head that I was going to drop dead.'

(Resp. 61, Afro-Caribbean man diagnosed at medical check)

'Well, I was pretty upset because it does run in our family. Actually, my mother had it and obviously she died of a stroke at 76, so obviously that is all to do with hypertension.'

(WC 33, diagnosed at consultation for dizzy spell)

Another reason for feeling shocked or shattered also expressed by a few of the men was the implications of having 'high' blood pressure for life insurance, and for employment especially in some manual occupations.

In contrast to these feelings of shock and upset, for another small group of people their initial response to the diagnosis of high blood pressure was one of positive relief. These people had all consulted their general practitioner because they were worried about particular symptoms and experienced a sense of relief on hearing that they had a rather lesser problem than they had feared. However this initial relief was often tempered by subsequent concerns in relation to the risks of a heart attack or stroke. As these respondents explained:

'Before I went to see him (general practitioner) about my swollen ankles I was really worried something major was wrong, such as problems with my kidneys. So in a way when he told me it was high blood pressure I was almost relieved it was nothing worse.' (MC 73)

'I was relieved in a way to find out that I wasn't going mad, 'cos I'd got myself in such a state by then I thought I was going to have to go away (ie. admitted to a psychiatric hospital). I didn't know exactly what was happening with me. I didn't mind until it sank in a little bit and then I thought, oh my God, blood pressure. It still worries me a bit.' ('Why is this?')

'Well, because of heart attacks and strokes, that sort of thing.'

(WC 02 - consulted for feelings of giddiness)

Whereas there were small groups of respondents who reacted in terms of either shock and upset or a sense of relief, for the majority of people the initial diagnosis of high blood pressure did not cause them a great amount of worry or concern. A few respondents acknowledged that this was because at the time they didn't really understand much about what high blood pressure was or realise its seriousness. However for most people their lack of worry appeared to reflect the reassurance they received from the doctor that their blood pressure was not dangerously high and/or could be kept under control with tablets:

'I was surprised because I didn't have any symptoms but my mother has always suffered from it and it does tend to run in families'.

('Were you upset or worried?')

'No, not really, because I was told it could be kept under control by the tablets'. (MC 75)

'No, I wasn't worried. He (the doctor) gave me tablets and said they would keep it down a bit, so I wasn't worried'. (AC 54)

Although the possibility of controlling BP with tablets and hence reducing risks often allayed concerns, many people also acknowledged that they did not like the thought of having to take the tablets for the rest of their life.

Another factor reducing initial anxieties, particularly for people of Afro-Caribbean origin, seemed to be the reassurance derived from perceptions of the 'normality' of the condition, with them frequently citing other relatives with high blood pressure:

'No it (diagnosis of high BP) didn't bother me much because you see my mum had it. It's in the family.'

('So your mum had it?')

'Yes, my mum suffered with it until she died.'

('How did she die?')

'A stroke. Also my mum's sister and brother had it too. I've also had a brother that suffers from it and he's had strokes as well.'

(AC 43)

'It didn't worry me at all. You see it runs in my family. My mum suffers with it and my brother. He had a stroke. He didn't know he had high blood pressure until he had a stroke.' (WC 05)

In response to further questions about whether she had asked her doctor why she had high blood pressure, this respondent commented, 'No, I just thought it was a natural thing. Some people get it and some people don't. (Later in the interview she identified the stresses at work and smoking as possible causes of her high blood pressure).

Similarly, another respondent who emphasized the normality of the condition explained:

'No I didn't worry because I know my mum had it. My bigger cousin, she got it last year and her mum had a stroke. We had a cousin, Margaret and she got it and died. It was like she was diagnosed one Friday and the Friday following somebody found her in the street. So it's in the family you see.'

('So didn't it upset you that you should get it?')

'No, no, I wasn't upset.' (AC 14)

The interviewer commented that these respondents appeared genuinely surprised to be asked if they felt upset or worried, even though they had recounted that several people in their family had experienced high blood pressure and died of a stroke. This acceptance of high blood pressure as something that many people get and so not a particular worry, even though they were aware of the risks of a stroke, is difficult to interpret. Does something that is prevalent and therefore familiar reduce its threatening nature, despite the risks it carries, or does a belief in inherited risks result in a feeling of inevitability and a lessening of the shock? A problem for the interviewer was that this response differed markedly from her own expectations and interpretation of their family history and was therefore difficult for her to 'understand' and identify with. She was also reluctant to probe further, fearing that such questioning might create greater concern and worry by conveying her own

ideas and feelings. This is an area which requires to be explored in other interviews to understand more fully the set of beliefs and attitudes that underlie and give rise to this response. In particular there is the question of why apparently similar family histories are interpreted in different ways and may either reduce the level of upset and worry experienced, or alternatively form a source of worry. For example, the middle class patients who identified relatives who had died of a heart attack or stroke were all upset to be diagnosed as having high blood pressure themselves, although a few derived comfort from identifying a relative whose high blood pressure had been successfully controlled and not caused any particular health problems.

The pattern which emerges is thus of a range of responses to the initial diagnosis of blood pressure. Individual responses appeared to be influenced by both situational and personal factors. Situational factors included the circumstances in which diagnosis was made, with feelings of 'shock' being most likely if this occurred during a routine medical check, and the experience of relief if they were consulting about symptoms which they feared were signs of a more serious condition. The doctor's reassurance concerning their blood pressure level and the possibilities of control was also often important in reducing initial worries. Personal characteristics influencing responses included people's awareness of the risks of high blood pressure, as well as their family history which appeared either to serve as a source of worry or to provide a form of reassurance.

There was an indication of some difference between social classes in their understanding of the meaning of high blood pressure at the time of diagnosis, with 7 of the 60 working class patients but only 1 of the 16 middle class patients explaining that they had not been worried because they had not really understood the meaning of high blood pressure. The other main difference between groups was that the Afro-Caribbean patients more often identified several relatives who had been diagnosed as having high BP and had died of a heart attack or stroke and frequently appeared to derive something positive from this knowledge when they themselves were diagnosed.

Longer term psychological responses

At the time of the interview all respondents had been diagnosed and treated for high blood pressure for at least one year, giving time for them to develop their ideas and to acquire knowledge about this condition. By this stage most respondents were aware that high blood pressure is associated with risks of stroke or heart disease. Only four working class and one middle class respondent said that they did not know what might happen as a result of their high blood pressure, although it is difficult to know if this response reflected a lack of knowledge or a desire not to acknowledge the risks associated with high blood pressure.

Although almost everyone identified high blood pressure as being associated with increased risks of a stroke or heart disease, only about one-third of the working class and one-half of the middle class respondents mentioned both these conditions. In general, a stroke was more frequently mentioned than heart problems (Table 10). The exception was among White working class men who more often identified heart problems, which may reflect the image of heart disease as a white male disease and the highest rates of coronary heart disease among this group.

When asked about their current worries, only a small group acknowledged that they 'often worried' or felt 'very worried' about having high blood pressure. Worry was mainly associated with fears of a heart attack or stroke and having close relatives dying of these conditions. People currently expressing worries had not necessarily felt particularly worried, shocked or upset at the time of the initial diagnosis, with responses to this situation differing from longer term reactions. However the White working class people (predominately women) who attributed the cause of their blood pressure to their own personality in terms of being 'a worrier' were often among this small group who felt very worried about having high blood pressure.

Although only a minority said that they 'often' worried or felt 'very' worried, about a third of respondents acknowledged that it was something that 'occasionally crosses my mind' and 'sometimes you might think about it'. These thoughts mainly occurred in response to specific triggers, such as collecting a new prescription, feeling tired, dizzy, having pains in the chest, or other problems that reminded them of their high blood pressure. A few people were also concerned about the wider social implications of this diagnosis in terms of its effects on their employment opportunities or life insurance, as this working class man (40) explained:

'It bothers me at the moment because I'm job hunting and I have to put it down on the application form. I'm not sure how I would stand if I went for life assurance. Also there's lots of things that I would like to do but couldn't if it meant taking a medical'.

Whereas substantial numbers of people worried at least occasionally about their blood pressure, more than half said that they didn't worry at all (Table 11). It thus appears that there is a fairly broad range of psychological responses to high blood pressure. Although in the longer term this condition rarely produces very severe worries, nevertheless substantial numbers did acknowledge occasional worries, particularly about the possible risks or consequences of this condition.

The main reasons given for not worrying or not being very worried was the belief that if they took the tablets and saw the doctor regularly then things would be alright and they would not be at risk of a heart attack or stroke. They were also often reassured by the knowledge that their blood pressure was under control. In addition, a few people in all social groups held out the hope that they might reach a stage at which they would no longer need to take the tablets, although the majority viewed high blood pressure as a chronic condition requiring long-term drug therapy. Several Afro-Caribbean respondents also again expressed notions about the 'normality' of the condition which seemed to reduce their worry, while another aspect of Afro-Caribbeans' responses was their tendency to

accept their 'fate' as being beyond their control (ie. an external locus of control), believing that 'when your number is up, then it's up', and explained:

'I take life as it comes. If that's the way I should pass off this world, then that's the way I will pass. I don't worry about death.' (AC 29)

A further question regarding people's responses to high blood pressure relates to the effects of this diagnosis on self-conceptions of health, and particularly whether as a result of this medical label and being prescribed long-term drug therapy they regard themselves as 'ill' or 'sick'. Respondents all rejected these labels. However they were aware of and often commented on their rather ambivalent status of being 'under the doctor' and having a medical diagnosis but not being 'sick'. This ambiguity is shown by the following comments which formed a frequent response across both ethnic and socio-economic groups:

'No, I wouldn't say that I'm an ill person but I wouldn't like to say I'm healthy. I don't know whether that makes sense really. You feel as though it's always there but it doesn't affect you.' (WC 02)

'Not a 100% but not sick. Not really fit.' (AC 22)

'No, just someone with a complaint.' (WC 62)

'No, except I think the blood pressure is a chronic serious complaint which must make me less healthy.' (MC 72)

The presence of a medical problem thus meant that people perceived themselves as not entirely 'well' as viewed in clinical terms. They nevertheless recognised that they were not 'ill', as judged by their own functional assessment of their health based on their ability to carry out their usual activities:

'I'm just normal. I haven't changed my life one bit. I do exactly what I've always done. So I don't class myself as an ill person.' (WC 04)

'No, not really, because I go to work everyday.' (AC 47)

Although not currently regarding themselves as 'ill' or 'sick' because of their high blood pressure, there is the question of its effect on future or anticipated ill health in terms of people's perception of their vulnerability to particular causes of death. As a group they were relatively healthy, in that a requirement for inclusion in the study population was that they were not currently being treated for any chronic condition apart from blood pressure. When asked if there was any condition they thought they might get, less than one-quarter of both the working class and middle class respondents were able to identify any disease. About one-half of those identifying a disease (8 respondents) mentioned a heart attack or stroke. Other people cited a fairly broad array of conditions, which generally reflected their own past history or their family history, and comprised pneumonia, bronchitis, arthritis, cancer, Huntingdon's chorea, depression and diabetes. It therefore appeared that although diagnosed as having high blood pressure and aware of the increased risks of cardiovascular disease, only a small group felt at high personal risk of a heart attack or stroke. This lack of feelings of vulnerability was often associated with their faith in the drugs to control their blood pressure and the knowledge that their blood pressure was not very high.

When asked what disease, if any, they most feared, the overwhelming response across ethnic and socio-economic groups was cancer. Only seven respondents mentioned any other conditions they feared, namely diabetes (because of the injections), blindness and senile dementia, whereas cancer was mentioned by nearly one-half (28/60) of the working class respondents and about one-third (6/16) of the middle class respondents. The smaller number of middle class people identifying cancer as a feared disease arose because only one middle class man mentioned cancer (lung cancer as he smoked), whereas for women the pattern was similar to other groups, with 5 of the 8 middle class women mentioning cancer. It is possible that the images and fears surrounding the word 'cancer' may have led some people not to name it as a disease they feared, with several people hardly liking to

mention the word 'cancer'. However it appeared that the reason that middle class men did not identify cancer as a feared disease was that they genuinely did not feel themselves vulnerable to this condition.

The responses of the present group of respondents are reminiscent of Sontag's (1979) portrayal of cancer as the most feared and dreaded disease, associated with images of its insidious and overwhelming nature, and its capacity to destroy its victim by a slow, painful death. Sontag describes cancer as having replaced tuberculosis (TB) as the most feared and incurable condition, while just as cancer is beginning to lose some of its stigma, there has emerged a new disease, namely AIDS, whose capacity to create a spoiled identity is far greater (Sontag, 1988). She suggests that societies need to have one illness which becomes identified with evil but that it is hard to be obsessed by more than one. However it is likely that whether AIDS or cancer is most feared currently varies between different sections of the population associated with perceptions of their personal vulnerability, with cancer still being accorded this position among the present group of respondents. In terms of risks it appeared that a few respondents felt themselves to be particularly vulnerable to cancer because close relatives had died of cancer, whereas the more general feeling was that cancer is a condition that can strike anyone and they did not know if this would be their fate.

The notion of the suffering associated with cancer, lay behind the general fear of this condition and was often contrasted with what was perceived as a fairly quick death associated with heart troubles:

'Cancer. Most people are not afraid of death as such, they are afraid of the way they die. With heart trouble you can be sitting here and then "bomph" gone. You don't know anything about it, you haven't suffered as such. Whereas with the other one (cancer) you can suffer. Well you do suffer. That's my only fear'. (WC 46)

'Cancer... the one disease I hate, I don't even like to hear the word cancer. It's such a waste, you can't control it once it's got hold of you

... it's the kind of disease which if it's got hold of you, they (the family) can just watch you slowly drifting away'. (AC 11)

'Cancer.' (Why do you fear cancer so much?) 'Because there is no complete cure, it can just creep up on you. Mind you there is no cure for high blood pressure and heart attacks, but I wouldn't want to die from cancer.' (WC 05)

One respondent explicitly linked cancer with earlier images of TB:

'Both my parents and the wife's mother died of cancer. It's something I really wouldn't like to get. I know it used to be TB when we were young. Cancer is now just a new word for TB. If I get cancer I don't want to suffer. I want to die straight off.' (WC 01)

However, as Sontag (1979) observes, despite the shared images of cancer and TB as a feared and fatal disease, TB was surrounded by greater sentimentality and regarded as a disease apt to strike the hypersensitive, the talented, the passionate.

Although cardiovascular conditions form the major cause of death exceeding that of cancer they evoke different responses. As we have seen, heart disease is often portrayed in positive terms, being associated in people's minds with a quick death and absence of suffering. Unlike heart disease or cancer, stroke does not appear to be associated with lay representations and hence either negative or positive images. Nevertheless people who do survive a stroke often experience considerable physical disability as well as possibly mental and speech impairments and feelings of depression and frustration (Ebrahim, 1990; Anderson, 1992). The lack of strong social metaphors and meanings surrounding this condition may partly reflect its fairly limited depiction in the media, and also be linked to the concentration of strokes in the elderly age group rather than forming a condition which is widely distributed across adult age groups.

Behavioural responses

Given the fairly limited nature of the psychological impact of hypertension, it is not surprising that this condition does not appear to have caused many people to have changed their daily activities and social roles. For example, only five working class respondents reported changes in their work or time off work as a result of their high blood pressure. This consisted of two manual workers who had given up heavy labouring jobs because of their blood pressure, one station foreman who explained that he was not allowed to work if he did not feel well and was on medication, and two people who identified periods off work because of their blood pressure. No other changes in usual daily activities were reported as a result of their blood pressure problems, apart from a few people giving up jogging or sports because they thought this might be too strenuous and harmful. It is possible that sexual activity was affected although no information was given on this as a current problem.

Respondents also did not think that their family members treated them any differently because of their blood pressure problems, apart from some of the men saying that their wife was careful about their diet. They often appeared to be surprised to be asked this question and frequently explained that their family did not regard their blood pressure as a major problem since it did not affect their activities.

Although people do not appear to have entered a sick role or to be regarded as sick by relatives, an important effect of high blood pressure on their general life and activities was that they often said they did not rush around as much and tried to relax and rest more. This generally involved them in doing things more slowly, and sitting down to rest and relax. This concern to rest and relax did not appear to be associated with a self perception of themselves as 'sick' and changed self-image, but rather formed a way of managing the condition. Resting was partly a response to people's experience of physical symptoms. About one-quarter of each group of respondents commented that they often felt tired,

lacking in energy and needed to rest more, with this being mentioned most frequently by women:

'I just carry on and do my work (ward orderly). If I feel tired I just sit down and have a few minutes rest, then continue with what I am doing (AC 43)

'I have cut down. Before I used to have the spirit to do the gardening, weed the grass and lots of things that need doing. Since I've had the blood pressure I've really had to take things more gently, and cut down on these things, because I really don't feel like it. The energy isn't there.' (AC 22)

'I just carry on as normal'

(Have you changed what you do at all?)

'Oh yes, I do rest more. If I don't feel like going out I won't. I take things a little bit easier now. Instead of where I used to run about, I just stroll now.'

('Why is this?')

'Well with this blood pressure I get tired. It's better if I take things slowly.' (WC 44)

'I seem to get more tired and need to rest. Also sometimes when I travel in a bus I feel sick. I don't know if it's my blood pressure or if my body is just like that.' (WC 38)

Feelings of tiredness, as well as occasionally other symptoms such as sickness and dizziness, were thus often linked in people's minds as possibly associated with their blood pressure problem or its treatment. However they generally acknowledged that they could not be sure about the cause of these feelings, and particularly whether they might be due to the process of ageing and hence not abnormal, and therefore did not often classify them as side effects. Although anti-hypertensive drugs are known to produce these types of side effects

it is difficult to establish precise cause-effect links in a community study. However whatever the cause, feelings of tiredness and lack of energy were a common experience among this group of respondents and were regarded by them as possibly linked with their blood pressure.

Whereas resting and 'taking things easily' was often associated with general feelings of tiredness and lack of energy, these behaviours were also a response to people's perception of symptoms that they interpreted as indicating that their blood pressure was 'high'. Altogether two-thirds of the Afro-Caribbean respondents and one-half of each of the groups of White respondents said that they were aware when their blood pressure was up. The most common symptoms indicating a rise in their blood pressure was the experience of pains or 'sensations' in their forehead (or sometimes the back of the neck). This was often described as a 'pressure', 'fuzzy feeling' or being 'a bit like a headache but not quite', and was reported most often by the Afro-Caribbean respondents (Table 12). Other symptoms described were feeling weak or tired, problems of vision, dizziness or giddiness, awareness of their heart, feeling hot or that their blood is hot. People's response to these symptoms was to rest for a while, and to take their tablets if these had been 'left off' as was common among the Afro-Caribbean respondents (see Chapter 6). Confirming these findings, Meyer et al (1985) in a study of hypertensive patients attending clinics in Milwaukee reported that 71% of the newly treated group and 92% of those who had continued in treatment for at least three months thought they could tell when their blood pressure is up, with the most common symptoms again being a headache, awareness of their heart pounding and dizziness. Their respondents also generally agreed with the statement that 'people can not tell when their blood pressure is up', although this appeared to represent their formal knowledge rather than their personal beliefs. As in the present study they frequently added such statements as, 'my doctor tells me that people can't, but I can'. There are however questions of whether these subjective perceptions are accurate reflections of bodily state and thus correspond with clinical measures of elevations in blood pressure. Baumann and Leventhal (1985) examined this question based on forty-four insurance company

employees whose blood pressure, mood, symptoms and predictions of their blood pressure were measured twice daily for ten days. Twenty subjects had elevated pressures and 24 did not. The data showed that self-predictions of blood pressure were most strongly associated with reported symptoms, next with reported moods, and least with actual blood pressure. The authors conclude that there was no reliable association between systolic pressure and predictions and that the commonsense belief that blood pressure can be accurately monitored is not supported by their data. They suggest that people's beliefs that moods and symptoms are associated with elevated blood pressure, and the symptoms selected (eg. headache, flushed face, lightheadedness), reflect the known consequences of high blood pressure, including stroke and heart attack, and the concrete experience of increased heart rate and cardiac output that we all have under conditions of high physical exertion. However although putting forward this explanation for their findings, Baumann and Leventhal identified several limitations of their study. These include the limited data, which involved just 20 observations in only 43 subjects collected at the same times each days, and the fairly low blood pressures among the subjects studied, with only twenty of the participants having a diastolic blood pressure above 95mm Hg of whom only five people were taking medication. They thus accept that despite the findings of their study it may still be possible to identify and characterise subjects who can predict blood pressure changes with some consistency or to teach subjects to make such judgements. Also as they note, studies in biofeedback, such as those by Videgar et al (1983) have shown that people are able to learn how to more accurately estimate systolic blood pressure levels.

It is unclear from the limited studies to date whether perceptions by the present group of respondents of times when their blood pressure is high reflects clinically measurable elevations, possibly associated with the type or dosage of the prescribed drugs, their irregular use, or the effects of herbal remedies, or whether it reflects interpretations of their bodily state based on their awareness of themselves as someone with blood pressure and their conceptions of the nature and causes of blood pressure elevations. Answers to such questions require studies specifically designed to test these relationships. However

whatever the cause or clinical significance of these perceptions they do appear to be widespread and exert an important influence on behaviours.

The emphasis on resting and avoiding stress reported by large numbers of respondents therefore appears to be partly a general response to feelings of tiredness and fatigue and to people's perception that their blood pressure is up, but also formed a more future-oriented strategy with the aim of preventing these states and controlling their blood pressure. Thus when asked what they thought was important in controlling their blood pressure nearly half of both the working class and middle class respondents talked about the importance of relaxing, keeping calm and not rushing around. Typical explanations of this approach to controlling their blood pressure by people who felt they could tell when their blood pressure is high were:

'If I start to get worked up at work or even at home, it's not worth it. I try to relax.'

(So do you feel getting worked up is bad for your blood pressure?)

'Oh yes definitely'

(Do you just feel that, or has anyone told you?)

'I just feel that myself' (WC 62)

'I never think about it (blood pressure), just carry on a normal life. I try my best not to over do it. Don't get yourself overheated, over-emotional. These are the things that you are not supposed to do, because if you do that it goes up.'

('Who told you that?')

'Well sometimes I do find out myself'
(AC 31)

A few people who did not feel they could tell when their blood pressure is high also appeared to rest as a preventive strategy and sometimes said that their doctor had advised them to relax and lead a peaceful life. This woman describes this approach:

'Since I found I had blood pressure just over a year ago, I've slowed down. I used to rush. I'm a terrible rusher for doing things in the morning. I must have everything done, but then I always try and sit down for a while if I know I've been rushing and I would never have done that before. Now I would make sure. I would try and sit down for a while and rest to try and keep it down.' (WC 15)

It thus appears that this emphasis on resting, relaxing and taking things more slowly is partly a direct response to feelings of tiredness and other symptoms, and partly a more general preventive strategy linked to notions of what is desirable behaviour for people with high blood pressure. However these acute and preventive models did not form separate and distinguishable categories in people's minds, and in reality may frequently co-exist and interact. For example, the experience of symptoms that are linked in people's minds with their high blood pressure may encourage a greater emphasis on resting and avoiding stress as a general preventive strategy and approach to blood pressure control, while this approach may also be suggested by respondents' own views of the causes of their blood pressure or occasionally recommended by doctors.

Labelling effects

The respondents' accounts suggest that the diagnosis and treatment of high blood pressure rarely forms a source of major long term worries and anxiety among this group of general practice patients. Nevertheless substantial numbers of people do worry at least occasionally about the risks of a heart attack or stroke, with this often being triggered by the need to collect a new prescription or visit the doctor. Similarly, they generally acknowledged that being 'under the doctor' and taking tablets means that they are not quite 'healthy', although not regarding themselves as 'ill'. Several factors appeared to reduce the psychological impact of hypertension for most respondents. One was the reassurance given by doctors that their blood pressure could be controlled and/or was under control, which was often coupled with the respondents' own faith in their doctor and in the effectiveness of the drugs prescribed. Secondly, heart disease appeared to be surrounded by

a fairly positive image and 'stroke' by the absence of an image with neither condition conveying fears of pain, suffering and disability or being associated with a social stigma. Thirdly, for Afro-Caribbean respondents their worry was often reduced by the reassurance derived from the perceived normality of the condition and their acceptance of their 'fate' as something beyond their control and which there is therefore no point in worrying about.

In behavioural terms there was little evidence of the diagnosis and treatment of hypertension causing people to give up or take time off work or not carry out other social roles. To the extent that this condition does influence daily life this appears to be through people resting more and being concerned not to rush around too much and to avoid stress, with this being partly associated with the meaning of high blood pressure and the possibilities of its control, and partly a response to their experience of physical states such as feelings of tiredness, pains in the head and giddiness.

The impact of high blood pressure among the present groups of respondents, whether assessed in psychological or behavioural terms, does not therefore provide evidence of major adverse labelling effects which would rate significantly on most of the traditional measures employed (see chapter 2). Nevertheless, the overall impact can be regarded as significant at a population level if large numbers of people are worrying at least occasionally and altering their pace of life and resting both as a response to symptoms and as a preventive measure. With regard to reported symptoms there are questions of how far these are directly linked with their blood pressure and its treatment, or have causes that lie outside this sphere, including the possible effects of a medical label in influencing people's interpretations of bodily states. This in turn points to the complex interaction of psychological, physiological and social processes and in particular raises questions of the effects of drug regimes in producing the symptoms and health states experienced by respondents. The specific effects of hypertensive drugs on people's quality of life has not been widely evaluated, although a few studies have drawn attention to the range of

impacts for different drug regimes and suggests that patients' experience and responses cannot be entirely attributed to the meanings of hypertension at a psychological level (Croog et al, 1986; Jachuk et al, 1982).

General practitioners and the seriousness of high blood pressure

General practitioners are responsible for the diagnosis of high blood pressure and hence of placing patients formally in an 'at risk' category, while individual doctors vary in the blood pressure levels adopted for the diagnosis of high blood pressure and beginning drug therapy (see Chapter 4). Doctors also influence the meaning of this condition for patients, and may reassure patients and minimise the illness idea or contribute to perceptions of the seriousness of this condition. This will depend on the information and explanations provided, their expectations of patients, and the emphasis and manner in which these are communicated. However it is possible that the approaches adopted by individual doctors may often contain elements of both illness minimisation and amplification.

The general practitioners interviewed were all aware that the diagnosis of high blood pressure can often be a worry for patients, in view of the increased risks of a heart attack or stroke and the requirement to take tablets on a long-term basis. Several general practitioners working in practices with substantial numbers of Afro-Caribbean patients also thought that as a group they worried more than their White patients, with this view being based on the greater number of questions asked by Afro-Caribbean patients and the importance they attached to having their blood pressure checked. However such behaviours rather than indicating greater worry may also partly reflect cultural differences in patients' expectations of a medical consultation and willingness to ask questions. The Afro-Caribbeans' tendency to 'leave off' the prescribed drugs was also associated with their attaching even greater importance to blood pressure checks (see chapter 6).

General practitioners confirmed the patient's view that they did not respond to their hypertension by entering a sick role, although several doctors thought that the diagnosis of hypertension reduced people's general ability to accommodate symptoms and increased consultation rates for a range of symptoms.

In terms of their own views, only one GP (11) regarded patients with essential hypertension as 'ill' and thought that his patients should accept this. This general practitioner had a low and fairly rigid threshold for treatment, and began drug therapy at 90mm Hg diastolic for patients aged in their forties and at 100mm Hg diastolic for elderly people. Most general practitioners shared a similar view to patients of the rather ambivalent status of hypertension. This is illustrated by the following typical responses of general practitioners:

'No, I tend to use the word ill for somebody who is perhaps physically or mentally out of sorts. People who you see with hypertension are not ill in as much as they are able to carry on doing what they want to unless the hypertension is very severe.' (GP 05)

'No, I would rather think of it as a weakness of their constitution.'
(GP 21)

Some general practitioners responded to these views by placing particular emphasis consultations with patients on minimising the illness idea and included many of the general practitioners who adopted a flexible approach and fairly high thresholds for commencing drug therapy. These doctors described their approach to patients in the following way:

'I tell them that this doesn't mean that they are ill or even likely to become ill. It is merely a precaution to avoid them becoming ill.' (GP 08)

'If you can put it across to them that it is a possible variation of the normal that they happen to have, and say that your blood pressure is a bit higher than most peoples and it may cause them problems, then you

won't make them feel as if they are ill, which I think is a great pity.'

(GP 05)

Questions to general practitioners about what they explain to patients regarding the need for long-term drug therapy again showed that differing messages were being given. About one-third (8/21) of the general practitioners said that they told their patients fairly firmly that they will be on medication for the rest of their life. Typical responses when asked whether they inform patients that they may need to take anti-hypertensive medication for the rest of their life were:

'Yes, I certainly do. I make a very big point about that so they don't misunderstand.'

(What is their reaction to this?)

'Usually their face falls.' (GP 06)

'Yes, I never mince words with them.'

(What is their reaction to this?)

'I presume they accept it. I presume they trust what I say. They never say anything.' (GP 15)

'Yes, I tell them that all I'm doing is reducing the pressure and if they don't take the tablets then the pressure will go up again.

I think a lot of people are rather horrified by it but they don't express that very often. Some of them will make some sort of noise which I interpret to mean that they are horrified about it. Some repeat it and say, 'what, for the rest of my life?' Then you have to reinforce it.' (GP 18)

Another nine general practitioners although telling patients that they will probably need to take the drugs for the rest of their life also described how they also hold out the possibility that things may stabilise, especially if patients reduce weight, change their diet or stop smoking. They regarded this approach as giving patients hope, and as providing an incentive to undertake these life style changes. Another four GPs (04, 07, 12, 13) took this rather further and said they never told patients that they would need to take

the medication for the rest of their life as they did not think this was necessarily true. As one GP (04) explained in relation to the life long use of anti hypertensive drugs:

'I never say that. That is a thing that I think any doctor shouldn't say. You can't say that, because I have about 20 patients and their blood pressure has stopped and then we have just monitored it...'

Whereas this general practitioner adopted a fairly low threshold for commencing drug therapy, another GP (07) who adopted a high threshold and flexible approach to drug therapy explained that he had a lot of patients who had been on anti-hypertensive medication for years who he was trying to 'wean off' being tablet takers.

There is thus evidence that individual practitioners convey differing messages to patients regarding the need for life-long drug therapy, whereas the majority adopt the conventional view and present anti-hypertensive medication as life-long treatment, a minority of practitioners believe that it may be possible to take people off the drugs or at least hold out hope of this. Evidence to support this latter approach is provided by a number of descriptive studies and controlled trials which suggest that a significant proportion of patients with well controlled blood pressure treated for several years maintain a 'normal' blood pressure after withdrawal from therapy (Fletcher et al, 1988). For example, the MRC trial of mild hypertension (MRC Working Party, 1985) found that after a 24 month follow-up, over 45% of those who had withdrawn from therapy had a blood pressure of 90mm Hg or under, although the proportion was lower for overweight persons. Echoing these findings a recent editorial in the British Medical Journal stated that doctors should 'attempt to reduce or discontinue drug treatment in patients whose pressures have become normal', thus questioning current orthodoxy (Beevers, 1988).

Another way in which general practitioners' messages and management of high blood pressure may have contributed to differences in patients' perception of the seriousness of this condition, is through their responses to non-compliance with drug therapy. Most

general practitioners viewed 'non-compliance' with drug therapy in negative terms and a few sought to encourage compliant behaviours by 'threatening' patients regarding the risks of heart disease and stroke, whereas at the other end of the spectrum there was a small group of general practitioners who adopted a fairly tolerant, permissive attitude to 'non-compliance' with medication (see Chapter 6). Similarly the emphasis given to life style changes may also contribute to images of the seriousness of high blood pressure. As one GP (01) observed:

'When you first explain to them, particularly the obese patient and the smoker, you are telling them all the problems that elevated pressure is going to cause. You are more or less ramming it down their throats. You're saying, look, these are all the things that are going to happen if you don't listen to our advice.'

These findings, although by no means a comprehensive account of general practitioners management of high blood pressure, nevertheless indicate how individual doctors may often contribute to patients' views of the seriousness of this condition and their personal risks through the messages they present, either directly or indirectly, during the course of the consultation. Whereas the role of doctors in providing reassurance and reducing 'labelling effects' has been widely recognised, less emphasis has been given to the ways in which doctors may contribute to the adverse psychological impact of this condition. Similarly the importance attached by some doctors to rest, relaxing and avoiding stress and tension may also have influenced behavioural responses. What is highlighted is therefore the variations in the messages and meanings that are conveyed to patients by individual general practitioners in a community setting, and contrasts with the more standard procedures that form an integral part of the controlled trials of hypertension detection and treatment. These issues of general practitioners expectations and management of patients, particularly in relation to their prescribed medication, are considered further in the next chapter.

Chapter 6

USE OF DRUGS AND OTHER REMEDIES

This chapter first examines patients' accounts of their level of adherence with drug treatment and forms of non-adherence. It then explores the reasons for deliberate non-use of the prescribed drugs which is commonly reported by Afro-Caribbean respondents and suggests that this is related to their traditional cultural beliefs and practices. Individual doctors' expectations and responses to various forms of patient 'non-compliance' are then described and the differences between patients and general practitioners in their approaches to blood pressure control are considered.

Attitudes to and use of medication

The respondents had all been prescribed drugs for their high blood pressure for at least one year and many for over 5 years. A large proportion had experienced a change in the type of drug or dosage prescribed over this period. This reflects the introduction of new forms of drugs and changes in general practitioners approaches to drug therapy and patterns of prescribing, as well as changes made in response to the adequacy of blood pressure control and patients' reporting of drug side-effects.

At the time of the study the most common drug regime was a diuretic plus beta blocker, with this combination being prescribed for just under one-half of the patients. The main difference between patient groups was that a rather smaller number of Afro-Caribbean patients were currently prescribed a beta blocker only and a larger number were prescribed a diuretic only compared with the White respondents (Table 13). The use of beta blockers alone is not generally recommended for Black patients as these drugs are less

effective with low renin hypertension which is more common among Black populations and also tend to mask most of the characteristic symptoms of hypoglycemia associated with diabetes which is again more common among Black populations. For these reasons diuretics and calcium channel blockers are preferred for these groups (Materson and Preston, 1989).

A second difference between ethnic groups is in terms of the adequacy of their blood pressure control. The most recent diastolic blood pressure recorded in patients case notes showed that less than one-half of the Afro-Caribbean respondents had a diastolic blood pressure of below 100mm Hg compared with about two-thirds of the White respondents (Table 14). Although not too much weight should be placed on a single reading, the finding of higher pressures among the Afro-Caribbean respondents does correspond with their higher risks of stroke.

Side effects are regarded as a common problem of anti-hypertensive medication and major reason for dropping out of treatment (MRC Working Party, 1985). About one third of both the middle class and working class respondents reported that side-effects of their anti-hypertensive drugs had been a problem at sometime, with this mainly involving feelings of dizziness, sickness and tiredness, and of impotence among men. Changes in their tablets appeared to largely resolve the problem. However it is possible that some people had dropped out of treatment altogether because of drug related side effects, with the respondents thus forming a selected group in this respect. There may also have been some under-reporting of drug side effects. In particular the men may have been reluctant to report problems of impotence which is an acknowledged side-effect of both diuretics and beta blockers to the female interviewer, with this only being mentioned by a couple of men after the tape had been turned off. More generally people sometimes experienced symptoms such as feelings of tiredness, headaches or giddiness, which they thought could be related to the drugs they are taking but were uncertain about this. As the following people explained:

'I couldn't really tell you. I wouldn't know for sure but I do get giddy spells, but I don't know what's causing it. I don't think I do get any

problems from the tablets.' (WC 36)

'I get headaches quite a lot but I'm not saying whether that's the blood pressure or not doing that, I don't know. I always get tired a bit, but I don't know if that's to do with the tablets or not.' (WC 39)

These uncertainties experienced by many respondents draws attention to the more general problem of determining what is and what is not a 'side-effect' of drugs, including questions of how serious an effect should be before it qualifies as a drug side effect. The taken-for-granted meaning of the term 'side-effects' among both lay people and doctors would merit more detailed study but was not examined among the present groups of respondents. In this respect it is notable the majority of doctors do not use the Yellow Card Scheme for reporting serious side effects (Griffin, 1984), which may partly reflect doctors own difficulties of identification and assessment. Possible long-term unanticipated effects may also not emerge or be noticed for many years. As a result drug side effects may be far more widespread than is often portrayed (Lumley et al, 1986).

Despite possible problems of drug side effects, the level of adherence with the prescribed drugs among the White respondents appeared to be high, with 26/30 working class and 13/16 middle class patients saying that they took the drugs regularly as prescribed. Of the other seven White respondents, two said that their general practitioner had taken them off the drugs at their last visit as their blood pressure was controlled. Thus only five of the total of 46 White respondents could be classified as non-adherers. Of these, three said they often forgot to take the drugs and two regularly 'left off' the drugs (Table 15). Thus although it was initially hypothesized that the high level of adherence reported by White working class patients might be a particular feature of this fairly disadvantaged group, subsequent interviews with middle class hypertensive patients identified a similar pattern. It therefore appears that there are high levels of adherence with the prescribed anti-hypertensive medication across social class groups among White people who continue in long-term treatment. These findings although initially unexpected based on the US literature correspond with those of a recent study by Fallsberg (1991) in Sweden which

provides a picture of a compliant hypertensive patient and a study by Gilbert et al (1990) in Australia who found that 91% of 180 patients enrolled at community pharmacies reported 'rarely' or 'never' missing their hypertensive medication. One explanation of these high levels of adherence is that over the relatively long period that people had been under treatment (the range in this study was from 1 year to over 10 years and in Fallsberg's from 3 to 39 years). A considerable number of people are thus likely to have dropped out of treatment altogether, leaving only those who regard the potential benefits of taking the drugs regularly as worthwhile or who are worried about the risks if they stop taking the drugs, and thus form 'survivors' of detection and treatment processes. There are also of course questions of the accuracy of patients' reports and in particular whether they are overestimating their level of adherence. However the interview situation did not in any way convey the expectation of 'compliance', and it is unlikely that respondents felt a need to provide a public account rather than expressing their own views and behaviours. The nature of their responses, in terms both of the conviction with which they were expressed and the considerable importance they attached to following their doctor's instructions and taking the tablets regularly also indicated that they were genuine compliers. For example, they frequently emphasized their belief that you should 'do what the doctor says, and then you can't go wrong,' and used such descriptions of themselves as 'a model patient' who takes their tablets 'religiously everyday', and 'maybe once in a blue moon I might miss them' or 'rarely missing, if ever'. They also often brought that day's or week's supply of tablets for the interviewer to see. Remembering was generally achieved through establishing a routine for taking the tablets, with additional supplies often being kept in other places, such as at work, just in case they forgot to take a tablet at home in the morning. People also often referred to the importance of their spouse in helping to ensure that they remembered to take the tablets. However although forgetting to take the tablets was not common among this group, they acknowledged that this occasionally happened, especially if their routine was disrupted, such as on holidays and at weekends. As Gilbert et al (1990) suggest, the high levels of compliance reported by recent studies may reflect the significant changes that have occurred in the types of medication available and

dose technology compared with the 1970's when much of the data used in U.S. studies which show low levels of compliance was collected. Differences in culture and in the organisation and provision of services between countries may also have an important influence. Thus as Gilbert et al (1990) notes, 'Assumptions about levels of patient compliance across national boundaries should be treated with caution' (p. 82).

Although most of the White respondents appeared to be genuine 'compliers' and were taking the medication regularly as prescribed, this behaviour appear to conceal differing views and concerns about the prescribed drugs. Although some people were not particularly keen to take tablets because it meant that they were not perfectly healthy, they nevertheless did not appear to have any major worries and regarded taking tablets regularly as a small price to pay for reducing their risks of stroke or heart disease. This response is illustrated by the following people:

'It doesn't bother me whether I have to take them all my life or not. If it's going to keep me alive then I've got to take them. That's how I look at it.'
(WC 44)

'To just pop a little pink pill in my mouth, there's a lot worse things that you have to cope with everyday. No, it doesn't bother me at all.' (WC 16)

(Whether having to take the tablets bothers him) 'No, not really. I've been taking it since 1979, so I've got used to it. I just accept it.' (MC 11)

At the other end of the spectrum were a group who particularly disliked being on the drugs and were concerned about taking anti-hypertensive medication on a long-term basis. This group were often worried about being 'addicted' or 'dependent' on drugs. As one middle class woman explained:

'I don't like being a pill addict, chained to pills for the rest of my life.'
(MC 70)

Similarly a working class respondent explained:

'No, I'd hate to think I have to keep taking the tablets, but if I have then I'll end up a drug addict.'

(What bothers you about the tablets?)

'You hear of so many children and old people suffering, just over taking maybe one pill, a sniff of glue. I'm frightened that will happen to me, yes deep down I am.'

(You think you will become dependent, an addict?)

'Yes, yes, that what I'm frightened of.'

(Have you talked with your doctor about these worries?)

'Certainly not, she'd be ashamed of me. She would say 'what a lot of nonsense'. I'm only assuming she'd say that, she's very nice but she might say that because probably I'm talking tommy rot' (WC10)

Concerns about addiction often seemed to encompass both psychological dependence and physical dependence in terms of the ability of the body to manage without the drug. The other main concern related to the possible long-term harmful side effects of taking medication over a period of several years:

'I have thought about side-effects. If you keep on with these tablets, what it is going to do eventually?' (WC 10)

'It bothers me taking the tablets long term because I don't know what the long term effects of the tablets will be. I don't think anybody does.' (WC 40)

It is not clear what factors influenced differences in perceptions and concerns about long-term anti-hypertensive medication among the White respondents and whether this was associated with differences in their attitudes to prescribed drugs more generally. However despite some differences in their underlying concerns, the White respondents in all social groups appeared to generally believe that the negative aspects of drug therapy were

outweighed by the risks if their blood pressure was not controlled and had therefore decided to take the medication as prescribed. However although usually aware that treatment may be lifelong they often held out some hope that they might reach a point when they would be able to be taken off the drugs - a view that was sometimes communicated by general practitioners who did not always accept the notion of life-long therapy or think that patients should be told this (Chapter 5).

The Afro-Caribbean respondents expressed many similar concerns but reported a much lower level of adherence, with only 12 of the 30 respondents saying that they took the medication as prescribed. Two people were taking a reduced dose because of side effects and two people often forgot the medication. However non adherence was mainly due to the practice of regularly 'leaving off' the drugs, reported by nearly half the Afro-Caribbean respondents (14/30) (Table 15).

'Leaving off' the drugs sometimes involved a regular pattern of only taking the drugs for a few days each week which had the effect of reducing the dose. However it might also involve not taking the drugs for a week or two at a time, or even not taking them for a couple of months, with the drugs being left off until people thought they required them again. Those who 'left off' the drugs were all aware that their doctor expected them to take the tablets everyday and recognised that high blood pressure was associated with increased risks of a heart attack or stroke. This behaviour was therefore not due to problems of understanding. It was sometimes described in terms of 'forgetting' and might be so classified in a structured interview. However the respondents' full description and explanation indicated that this consisted of 'deliberate forgetting' rather than purely lapses of memory:

'Sometimes I miss out, but mostly (I take them) everyday.'

(What about last week?)

'Yes I missed days out. I even missed yesterday and today.'

(Why is that?)

'I forget. I do take them, but I know that the pressure is alright anyway, so I don't want to continue everyday, so I forget to take them some days.' (AC 35)

This Afro-Caribbean woman had been on drugs for her hypertension for 10 years and her blood pressure was currently well-controlled (BP 120/80). However although leaving-off the drugs was most common among people with a diastolic pressure below 100mm Hg this practice also occurred at higher blood pressure levels. Overall 9/14 Afro-Caribbeans whose most recent diastolic blood pressure as recorded in their case notes was below 100mm Hg regularly 'left off' the drugs, compared with 5/16 with a diastolic blood pressure in the higher ranges. However among this latter group 3/6 Afro-Caribbean respondents with a blood pressure of 110mm Hg diastolic or over were 'leaving off' the medication. This practice of regularly 'leaving off' the medication at higher blood pressure levels suggests that this has important clinical significance and is likely to substantially increase risks of cardiovascular disease. However, at lower blood pressure levels individuals' cardiovascular risks are quite low, especially for women and non-smokers (MRC Working Party, 1985).

Leaving off the drugs occurred equally among men and women. There also did not appear to be any relationship between regularly 'leaving off' the tablets and the number of tablets prescribed. About one half of the Afro-Caribbean patients were required to take one tablet daily and one half were prescribed two or more tablets, with the number who regularly 'left off' the tablets being the same in each group.

A reason mentioned by four Afro-Caribbean men for 'leaving off' the drugs was the danger of mixing the tablets with alcohol. If they were planning to go to a party and drink spirits, often over the weekend, they would therefore not take the tablets for a few days around this time. Leaving off the drugs for a time thus enabled them to participate fully in social life. A more common reason for leaving off the tablets by both men and women was their concern about the possible harmful effects of drug therapy. This may have been influenced by current side effects, including problems of the effects of the drugs on sexual activity.

However explanations mainly related to their worries about the possible harmful effects of taking drugs over many years. This appeared to relate to notions of the accumulation in one's body of harmful substances and problems of 'toxicity', as well as fears of becoming 'addicted' to the drugs. These concerns were fairly widespread among the Afro-Caribbean respondents and were also as we have seen expressed by some of the White respondents. However their significance seemed to vary for the two groups. Whereas these concerns appeared to form a background worry among the White respondents, for large numbers of Afro-Caribbean respondents they formed a major factor causing them to either 'leave off' the tablets for several weeks or months, or take a reduced dose by using the tablets for only a few days each week:

'It sometime be 5 or 6 months and no tablets go down my throat. I don't use them. I see too many people on these tablets having side-effects, so I try to get away from tablets. I really must be gone bad to take tablets because I don't like tablets' (AC 30; BP 160/100)

'Sometimes I remember and sometimes I don't, because I don't want to build my hopes on tablets. I don't want to become an addict'.

(How often do you take the tablets?)

'Sometimes it's alternate days' (AC 29; BP 220/135)

The balancing of these perceived costs and the benefits of taking the drugs is described by the following Afro-Caribbean man (50):

'I find it difficult if I'm feeling fine for two or three weeks to keep taking a pill. At the end of the day is that pill going to make me better or worse? It's for making you better, right. So once you feel better, why continue taking it? If I have a headache, I take an asprin. Your headache goes. You don't take pills if you don't have a headache.... '

(What would you do if the doctor said your blood pressure was high, would you then take the tablets everyday?)

'Only if I was feeling bad all the time. If I was feeling fine for a day or two then maybe I would miss a day or two. If that's cheating on myself then that's it.'

This respondent went on to explain:

'I prefer to let nature take its course as far as my body is concerned. I'm not one to introduce anything to it if I'm feeling alright. If I'm feeling ill I will take any medication that will make me feel better or even cure me but if I feel better I don't see why I should take it, because I don't want to be addicted to nothing other than food and water.' (AC 50; BP 170/100)

People's description of feeling 'fine' in this context referred to not experiencing any symptoms linked with their blood pressure problem. This draws attention to a central aspect of drug therapy for essential hypertension in that people are being treated merely for an asymptomatic risk factor. The Afro-Caribbean respondents interviewed although often 'leaving off' the drugs had not opted out of treatment altogether and took the medication from time to time or on a more limited basis than prescribed. An important trigger causing people to take the drugs was their own feeling that their blood pressure was up. Altogether two-thirds of the West Indian respondents felt they could tell when their pressure was high and one-half of the White respondents, with the most frequent symptom being the experience of pains or sensations in their head (Table 12). A general response was for people to rest while if the Afro-Caribbean respondents were leaving off the drugs they took some tablets which they viewed as a tranquilliser. As one Afro-Caribbean man explained:

'You never feel ill, taking the tablets or not taking the tablets never make you as a person feel any different. The only time you will feel different is if you didn't have any sleep, if you had terrible problems which plays on your mind, then you'll have headaches. So you probably take the tablets and use the tablet not as a blood pressure tablet but as a tranquilliser because you feel you're in a state.' (AC 11; BP 170/110)

Similarly, an Afro-Caribbean woman (43) aged 47 years replied when asked if she had noticed times when her blood pressure seems better or worse:

'Yes, when it's high I can tell.'

(How can you tell?)

'Just there (indicates forehead). It's just a mucky feeling you have there. It don't pain you, it's just funny. You have a funny feeling there and then you know it's high.'

(What do you do then?)

'I take my tablets then. When I get the feeling in my forehead then I double the dose and take two.'

(So then you take even more than you should do if you get that feeling?)

'Yes, because if I go to the doctor he'll double the dose because I'm only taking 40mg but when it's high he'll give me 80mg.'

(Even though the previous week you may not have been taking them?)

'Yes, that's right.'

(Do you tell the doctor when he doubles the dose that you hadn't been taking them previously?)

'No'

(You don't say anything?)

'No'

Later in the interview this respondent nevertheless stated her belief that it is very important to control high blood pressure and that if it's not controlled 'you end up with strokes'. To avoid this she thought that she should not get too stressed, take her tablets when necessary and not smoke or drink too much. Her blood pressure was currently 130/90.

The Afro-Caribbean respondents who felt they could tell if their blood pressure was better or worse were not all leaving off the tablets, and similarly, some people who regularly left off the tablets were not aware of changes in their blood pressure. However those people who regularly 'left off' the prescribed medication all appeared to be concerned to monitor

their condition and the effects of taking or 'leaving off' the tablets. They therefore usually visited their general practitioner regularly for a blood pressure check.

Thus another trigger to taking the tablets more regularly was being told by their doctor that their blood pressure was 'high' or had gone up. Some people who were now taking their drugs as prescribed were doing so in response to this information, although sometimes a visit to their general practitioner confused the picture:

'Sometimes I go there (to general practitioners) and they check the pressure and say it's high, but I've been taking the tablets everyday. Next time I go they say its not too bad, so I'm not sure what's happening.' (AC 60; BP 150/95)

'As I said, I was surprised several times when I go every month to my doctor. I feel so good that I feel I don't want to go, and when I go it's up. When I feel not so good and I go, he says it's alright. I don't understand it.' (AC 45; BP 170/100)

'Sometimes even though I've been taking them (the tablets) everyday the pressure is still up, and then I stop from taking them and the pressure is down. Well it don't make any sense'.

(Did you tell the doctor that?)

'No, I don't tell her anything'. (AC 34; BP 220/110)

The information derived in consultations with their general practitioner thus did not always correspond with their perception of their own behaviours and regularity of drug use. This may partly reflect the substantial diurnal variations in individual blood pressures as well as the difficulty of interpreting a single reading. Confusion was also introduced by general practitioners using words rather loosely to describe patients' blood pressure, such as 'alright', 'fine', 'not too bad' or 'a bit high', without being aware of the significance and meaning of these blood pressure checks, especially for people who were leaving off the drugs. A few of the White respondents also commented on the difficulties they experienced in understanding their general practitioners remarks about their blood pressure:

'One time you can go to the doctor's and he said "oh, your blood pressure is fine". I always think, well if it's fine, why doesn't he take me off the tablets. I just expect you have to take them all the time.'

(Does that bother you?)

'Not really. I have thought about side-effects. If you keep on with these tablets, what is it going to do eventually.' (WC 05)

It thus appears that people generally disliked being on drug therapy long-term, not merely because of the inconvenience of remembering and recognition that they are not perfectly healthy, but also because of concerns about the possible long term harmful effects of the medication. However the pattern of responses varied between social groups, with nearly all the White respondents but only a portion of the Afro-Caribbean respondents taking the drugs regularly.

This response may have been influenced by the Afro-Caribbean respondents' subcultural values and traditional health practices, for as Fallsberg (1991) comments, 'In people's consciousness, conceptions about the effects of medicines are bound to the cultural environment in which they live and their society's value judgements as regards treatment and cure' (p. 47). It is thus important to view the Afro-Caribbeans' responses in this broader context.

Afro-Caribbeans' cultural beliefs and practices

Whereas the widespread use of drugs forms the dominant approach to treatment in this country, in the West Indies herbal remedies have continued to play an important role in promoting health and curing illness in both rural and urban areas (Michie, 1992). This therefore formed part of the early experience of most of the Afro-Caribbean respondents. Herbal remedies were taken by over one-half (17/30) of the Afro-Caribbean respondents in the present study, including nearly all those people (12/14) who regularly 'left-off' the prescribed drugs. However, only two white respondents were taking a herbal remedy for their high blood pressure and included just one working class person who had learned of

their use from her Afro-Caribbean friends. This suggests that there has been little spread of the Afro-Caribbeans' traditional use of herbal remedies to the wider community

The herbal remedies taken by the Afro-Caribbean respondents were referred to as 'bitters', which accurately describes the taste. One type consists of a herbal tea. This may be made from boiling the leaves and stalk of a plant known as sorocce (or ceracee). Ideally the fresh plant is used, although in England people often have to make do with the dried form. Another herbal tea regarded as a remedy for high blood pressure is made from traditional English herbs - mistletoe, yarrow, hawthorn berries and lime flowers, purchased in dried form at a local herbalist shop. An alternative is to purchase a bottle of bitters. One variety, sold in a local market in Brixton, is described as 'A Blood Toner' suitable for high blood pressure, diabetes, billiousness, loss of appetite and general debility, and lists eight herbs and roots as the ingredients.

Herbalism was a common form of healing prior to the development of modern drugs and has deep roots in Britain where the first description of herbal remedies dates from 1260 AD and numerous other herbals' have been published (Helman, 1985). Recent years have seen a growth in herbalism as part of a more general expansion of various forms of complementary medicine (Reilly, 1983; Thomas et al, 1991). However the use of bitters by Afro-Caribbean hypertensive patients rather than reflecting a re-emergence of herbalism in the UK, represents the continuation of a tradition brought over from Jamaica where the vast array of herbal remedies forms a synthesis of the herbal lore and folk medicine of West Africa, Mayan and other cultures (Mitchie, 1992). The various herbs or 'bush' grow wild in Jamaica and are gathered and used both as a general tonic to promote health and as a cure for specific illnesses. As one respondent (21) explained:

'There are lots of things you get in the West Indies that you can't get over here. You can go up the mountains and pick herbs, charney root and bloodweiss. You boil it together with watergrass.'

(Is that what you would use for your blood pressure if you were still living in

the West Indies?)

'Yes, all those things bring your pressure right down.'

It was often difficult to identify whether respondents were taking bitters specifically as a treatment for high blood pressure (either complementing or as an alternative to the prescribed drugs), or whether it was being used as a more general preventive and health promoting measure to purify the blood and cleanse the system, as these did not appear to form distinct categories in the minds of the respondents. This may reflect the notions underlying herbalism of health as balance and disease as a disturbance of physiological and mental/emotional equilibrium, which contrasts with the emphasis on the identification and treatment of specific pathologies that characterises the biomedical approach to health. Thorogood (1988) in a study of the use of bush and other home remedies amongst Afro-Caribbean women in Britain also describes herbal remedies as being used as 'washouts' to cleanse the system, as 'tonics' to strengthen and restore the body, and as a cure for a range of complaints, with ceracee being employed in each of these ways. She emphasizes the role of women in providing and administering these remedies which may also have characterised the present group of respondents, although they were taken equally by men and women.

Herbal remedies were described by respondents as being 'natural' in terms of deriving from a plant, and as 'not doing you any harm' reflecting both their naturalness and their relatively weak effects. Such remedies do possess pharmacological properties and there are currently proposals to review their efficacy and safety for conditions such as hypertension and depression (Trumpington, 1987). Nevertheless, for many Afro-Caribbean respondents the natural and relatively harmless nature of herbal remedies was seen as their advantage, whereas they expressed particular concerns about the powerful nature of modern scientifically created drugs and their possible long-term harmful effects, and might therefore only take it 'when necessary' during an acute phase of their hypertension. However some Afro-Caribbean respondents took a different view, rejecting the value of herbal remedies and preferring drugs developed in the laboratory because of their being

more powerful and hence more effective. It was not clear what gave rise to this difference in responses but may reflect their earlier childhood experiences and contact with western medicine.

The continuation of traditional patterns was also shown by their attending a general practitioner as a private patient to seek a second opinion, reflecting their experience of paying for general practice consultations in Jamaica with only hospital care being publicly provided when they were young. One third of the Afro-Caribbeans (7 women and 3 men) occasionally consulted a general practitioner privately, including five people who had consulted about their high blood pressure. These consultations resulted in a confirmation of the diagnosis of elevated blood pressure, and either different tablets being given or reassurance about the appropriateness of those already prescribed. More generally they fulfilled their expectations of a consultation which they did not think were always met under the NHS, particularly in terms of the time available for their case to be discussed fully and examinations conducted. As this respondent explains:

'In the West Indies we have a lot of private doctors, not that we don't have National Health Service doctors because my country has recently had its own National Health Service, but we have always had private doctors and we pay them and expect a service from them, which they did give. You can call him anytime, day or night... It's no good going to a doctor and he starts to write a prescription out, like he's working in a factory - 'next one please' - that sort of thing - off you go. There's no time available. Some of us realise this, so that's why we go and get another doctor.' (AC 45)

However despite such concerns they continued to consult their own general practitioner on a routine basis and appeared to be more critical of the organisation and system of care under the NHS rather than of their own general practitioner who was seen as working within these constraints.

Respondents from different ethnic and social class background rarely described using other remedies or consulting other healers for their blood pressure. This is perhaps surprising given the increasing use of alternative medicines and healers, which has been attributed to both the inability of biomedicine to provide cures for many chronic conditions as well as a more general awareness of 'green' issues and rejection of 'modernism' (Bakx, 1991). However the lack of recourse to alternative remedies for hypertension among the general population may reflect the general absence of symptoms and restrictions associated with this condition, and the difficulty of knowing whether or not particular remedies are having a beneficial effect. As one GP (18) commented in relation to the use of home remedies:

'You get it with rheumatism but not hypertension. I think hypertension is a bit mystical to patients in a way because it doesn't produce symptoms. I think it's the things that produce symptoms that they tend to try out things for. It's difficult to try out remedies on hypertension because you don't know if they are doing any good or not. I'm not aware of any patients who've taken home remedies for hypertension, no.'

Forms of adherence and non-adherence

Various forms of adherence and non-adherence can be identified (Fig 1). The most complete form is to drop out of treatment altogether. This is known to occur among a large number of people treated for high blood pressure, although there is no evidence of its distribution among social class or ethnic groups. All the present respondents had decided to continue under treatment and their accounts indicate that the majority of White respondents were taking the drugs regularly and can be classified as adherers, whereas less than half the Afro-Caribbean respondents were in this category.

It is difficult to know how many of those adhering to the prescribed medication were merely 'obeying' the doctor rather than taking a more active role in weighing up the costs and benefits and 'evaluating' this course of action. It appeared that people were generally aware of the risks of high blood pressure, and although not liking to take drugs regularly and often concerned about the possible long-term harmful effects, they were even more

Fig 1 RESPONSES TO MEDICATION

1. Drop out from treatment
 2. Adherence
 - unreflective (obey)
 - reflective (evaluate)
 3. Non-adherence but remain in treatment
 - unreflective (forget)
 - reflective (self-regulation)
-

worried about the risks of uncontrolled blood pressure. Having perhaps made some conscious evaluation and decision regarding the prescribed drugs, what began as reflective adherence may often have become a fairly automatic procedure over the years and moved into the realm of unreflective adherence. However reflective and unreflective adherence are in practice not necessarily clearly defined categories. Most people are likely to engage in some assessment and re-assessment of their needs for medication, although this often occurs at a fairly informal level.

In terms of non-adherence it appeared that very few people genuinely forget to take the tablets (unreflective non-adherence), apart from occasional lapses when routines were disrupted. Instead non-adherence was mainly a deliberate action (reflective non-adherence) and was largely confined to the Afro-Caribbean respondents. This occasionally involved taking a reduced dose in terms of only taking one of the tablets prescribed, but usually involved 'leaving off' the tablets altogether for a day or two if they were planning to go to a party and drink, or leaving off the drugs on a regular basis for a few days each week, or over a longer period of time if they were feeling 'fine'. This non-adherence was associated with a concern to monitor and control their blood pressure and with regular visits to their doctor to have their blood pressure checked. It largely arose out of worries about the anticipated long-term harmful effects of the drugs as well as their current experience of side effects. Important triggers to taking the drugs (or even an extra dose) was their own feeling their blood pressure was up or being told this by the doctor.

People's behaviours in terms of long-term medication use appears to depend on their perceptions and experience of both the medical condition and the treatment. Aspects of the medical condition of importance include its symbolic significance, the nature of the symptoms and its prognosis or risks. The most salient characteristic of hypertension is the presumed risks of non-treatment, whereas for arthritis the experience of pain relief of symptoms is of primary importance (Arluke, 1980), and for epilepsy both risks of seizures

and the stigmatised nature of this condition are central characteristics (Conrad, 1985; Scambler, 1989). In terms of drug treatment the positive benefits of therapy on the condition may be balanced against its harmful side effects (both immediate and anticipated long term effects), and the adverse symbolic effects of taking drugs regularly in terms of reminding people of their medical label. Worries about the harmful side effects of long term therapy appears to be a general concern across medical conditions. However given the differing physical and psychological impacts of particular medical conditions it is not surprising to find that the main reasons for non-adherence varies between conditions. For example, among people with epilepsy the drugs have a positive effect in reducing risks of epileptic seizures, whereas a reason for wishing to discontinue drug therapy is often the pressing desire to shed the stigmatised status of 'epileptic' (Conrad, 1985). In contrast taking drugs for hypertension can only be justified in terms of risk reduction, and although confirming the status of a hypertensive 'patient' this does not carry a social stigma.

Both the meanings of medical conditions and of drugs are culturally shaped and may thus vary between different social groups. Among the present group of respondents the major cultural variation appeared to occur in relation to perceptions of the risks of drug therapy, producing differences in levels of adherence among White and Afro-Caribbean respondents. However a more complete understanding of cultural variations in perceptions of hypertension and its treatment could be gained from a community based study which includes people who 'drop-out' from treatment altogether.

General practitioners' and 'non-compliance' with drug therapy

General practitioners thought that the majority of their patients complied well but were aware that there was a group of non-compliers and that some people probably withdrew from treatment altogether. However they found it difficult to give any precise estimates of the extent of 'non-compliance'. Many general practitioners thought that Afro-Caribbean patients complied less well than their White patients with anti-hypertensive medication. In particular they commented that their Afro-Caribbean patients seemed reluctant to take long-term medication, especially if they are feeling alright, and often ask if the drugs are

still necessary. They also described the difficulties they sometimes experienced in controlling the blood pressure of their Afro-Caribbean patients.

'They (Afro-Caribbeans) have some sort of resistance to the idea of taking the tablets.'

(What do you think the resistance is?)

'That's what I would like to know. In certain patients I think it is a fear of side effects. I think there are also factors that I don't know enough about. If I see that their blood pressure is not controlled properly then I'm aware that non-compliance is an important reason why that might be the case. I quiz them about it. I ask if they are taking their tablets, if not why not and what's the problem. I don't think I've got far enough with the answers to these questions.'

Similarly, another GP (03) observed:

'Afro-Caribbeans, I find them more difficult to treat, to find something that is going to work, and will agree with them, and that they will take. Sometimes I have had to move around from various drugs all the time, because nothing seems to work...'

General practitioners did not appear to be aware of their Afro-Caribbean patients' use of herbal remedies for high blood pressure, although a few wondered if they might be trying home remedies. This lack of knowledge is not surprising since the Afro-Caribbean respondents rarely told their doctor about taking herbal remedies for their blood pressure or 'leaving off' the tablets because they were aware of their doctor's expectations and thought their doctor would disapprove of them not taking the drugs and think them stupid to use herbal remedies. As several people commented, their doctor did not understand Afro-Caribbean habits. They also did not want to disappoint their doctor through rejecting their advice, with non-disclosure thus serving to 'protect' both themselves and their patients. In contrast, they did discuss their private general practice consultations with their NHS doctor, and particularly if any changes had been made to their medication. Doctors in

practices with a large proportion of Afro-Caribbean patients were thus aware of this seeking of second opinions and generally showed a tolerant attitude, but often observed that the service they were providing must not be meeting patients' needs.

Whereas patients behaviours, and particularly their use of the prescribed medication, has so far been viewed in terms of the general expectation of 'compliance' with medical treatment', there are questions of how individual general practitioners explain and respond to patients' non-adherence and whether this is necessarily seen as deviance requiring control. Non-compliance was mainly attributed to patients' dislike of taking drugs, problems of forgetting, the experience of drug side effects and the fact that people with hypertension do not usually feel ill or have observable symptoms. However doctors differed in their attitudes to this behaviour. The comments and observations made by five of the 21 general practitioners (03, 08, 12, 17, 18) showed that this group accepted patients' autonomy and right to make choices regarding their use of the prescribed drugs. Non-adherence by hypertensive patients was thus described by one doctor as part of 'a very healthy disrespect for tablets that people are developing in general.' He attributed this attitude to the fact that 'people see, read and hear in the media that just about everything you swallow can harm you'. He went on to identify the differing messages that are given to patients by the medical profession and the problems that are presented for doctors:

'It is very difficult to encourage patients to go away without prescriptions and not to take the tablets which is what we are doing in many respects in our medical care because of the possibility of harmful side effects on the one hand. Then on the other hand, encouraging them to take tablets when they haven't got any symptoms. It makes a lot of sense to me when patients don't want to comply.' (GP 08)

This general practitioner placed considerable emphasis on patients' personality in determining their responses and described some patients as being more individualistic than others:

'Whereas some patients like to be told to do things, and will do whatever they are told to do by the fact of the very personality they have. They will do what you want them to do. The others have a degree of independence that makes them want to challenge everything that life throws at them, including the tablets.'

His approach to 'non-compliance' is therefore to 'encourage the patients to be frank and honest about it'. He went on to observe that 'I don't think there is anything else I can do'.

Another GP (12) categorised as having a tolerant attitude to non-compliance commented:

'Either they are not great pill takers which I am not either, or they have symptoms which they don't like, which is understandable since they don't get symptoms from hypertension. So it's a pretty healthy thing not to comply.'

Similarly, another general practitioner observed that 'to my surprise, I think the majority do (take tablets as prescribed), but there is an established majority who are terribly bad.'

He went on to state:

'To take tablets everyday when you haven't got any symptoms on a long term preventive basis, I think that requires either obsession or dedication. In a sense, I think non compliance is rather healthy, except of course in a patient who has had a subarachnoid haemorrhage and then follows that by being non-compliant. That's daft. But by and large, I'm amazed by how many of them seem to comply.' (GP 17)

Other aspects of the treatment of hypertension advanced as reasonable grounds for non-compliance were the problems for patients of knowing if they needed the drugs. Thus some general practitioners commented that it was quite understandable that they should stop taking the tablets to monitor and see whether they really need them. Another general practitioner although initially telling patients fairly firmly that they will be on drug therapy for the rest of their life, nevertheless when discussing patients' behaviour

acknowledged that doctors had relatively little to offer hypertensive patients and in these circumstances regarded their non-compliance as not unreasonable:

'If you haven't got any symptoms you may feel that it's not worth it for some possible distant event that might not occur anyhow. All you can promise a patient taking the treatment, certainly at the lower levels, is that they are less likely to get a stroke when they are 60 or more. You haven't got a lot to offer them really.' (GP 18)

Whereas about one-quarter (5/21) of the doctors can be regarded as adopting a tolerant, accepting approach to patient's non-adherence with medication, others regarded non-compliance in terms of deviance from expected behaviours. Some of these general practitioners appeared to adopt a fairly authoritarian approach to non-compliance with hypertensive medication. This included two general practitioners (04, 13) who said that they did not tell their patients that they would be on drug therapy for the rest of their life as they did not think this was necessarily true. Nevertheless, in terms of patient's adherence with the prescribed medication they commented:

'I think most patients, both Afro-Caribbeans and Europeans comply very well. A few at the beginning when they get side effects they might stop taking the drugs. If they stop the drug and they come back, I just tell them that they must take the drug, otherwise don't come here. Then they get the message clearly.' (GP 04)

'I really don't know if any people don't (take tablets) except those couple who find some excuse to say they couldn't come to the surgery to collect the prescription. I always ask and they always say "yes doctor, I finished the last one yesterday". I can't imagine any person under 60 who would say I didn't take the tablets. If anyone did, I would say 'then why am I taking your BP and giving you tablets?'. But I can't remember having had to say that to anybody'. (GP 13)

Similarly, another general practitioner described his response to patients' non-compliance in these terms:

'I explain well to them. If there is nothing else I can do I frighten them. I speed up the number of times I see them, or I say, "you better see one of my partners, we don't see eye to eye on this". That is rare though.' (GP 21)

In contrast, the majority of doctors, comprising over half the general practitioners interviewed, although expecting patients to take the medication regularly as prescribed did not present themselves as forcefully 'demanding' compliance. Instead they emphasized the ways in which they encouraged and explained to patients, and the importance of changing the drugs prescribed if they caused unacceptable side effects.

It thus appears that the general practitioners although generally aware of the high rates of non-compliance with anti-hypertensive medication, and the broad reasons for this, had little knowledge of the specific beliefs and practices of their Afro-Caribbean patients. The general practitioners responses also identify differing expectations and requirements for patients' 'compliance'. Whereas some doctors conform with the traditional medical view which requires strict adherence to the doctor's instructions in terms of a guidance-cooperation model, other doctors appeared to accept greater patient autonomy in decisions regarding their use of the anti-hypertensive medication so long as their blood pressure was not significantly elevated. As these doctors acknowledged, the benefits to individuals of long-term drug treatment in these circumstances is likely to be quite small and may be outweighed for individual patients by the negative psychological and physical effects. Also in contrast to current professional recommendations, a few general practitioners expected that some patients might be able to be taken off drug therapy rather than this forming a life-long requirement.

Changes in life styles and consumption

Respondents views of the important ways of controlling their high blood pressure often appeared to be multi-faceted, and placed importance on changes in behaviours and consumption as well as the use of drugs and other remedies. For example, in response to an

open question about what they thought was important in controlling their blood pressure nearly one half of both the middle class and working class respondents (17 Afro-Caribbean and 12 White working class) talked about the importance of relaxing, keeping calm and not rushing around (see chapter 5). In addition, one-half of the working class respondents (14 Afro-Caribbean and 14 White) and just over one-half of the middle class respondents identified particular aspects of consumption as important. This mainly consisted of avoiding too much salt and fats and reducing weight, with a small number mentioning reducing alcohol intake or cutting down on smoking (Table 16). However just over one-half of the working class and two-thirds of the middle class respondents were already non-smokers. Similarly, the importance of weight control is only likely to be mentioned in this context by people who regard this as of relevance for them. Taking their tablets was mentioned as one of the most important ways of controlling their blood pressure by about one-third of both the middle class and the working class respondents. However this fairly small proportion may partly reflect a feeling that this approach to blood pressure control comes within the medical realm, rather than being something that they personally can do.

It thus appears that considerable emphasis is given across ethnic and socio-economic groups to changes in consumption and behaviours in controlling their high blood pressure and promoting health more generally, with this including the respondents who regularly 'left off' the prescribed medication. This acknowledgement of the importance of changes in life styles and consumption probably partly reflects the increasing endorsement of this approach to promoting health among the population more generally and the resulting changes in diet, smoking, alcohol intake, exercise and other behaviours that have occurred (OPCS, 1990). As other studies have shown, people who are diagnosed as having a particular condition are also far more interested and receptive to health education advice which is seen as relevant to their particular problem than to more general health promotion messages (Stott and Pill, 1990). The effect is that for some respondents, and especially for people of Afro-Caribbean origin, the prescribed medication forms just one

aspect of their overall approach to the control of high blood pressure and reduction of cardiovascular risks.

General practitioners were asked whether they usually gave their hypertensive patients any advice about life style changes. This tended to elicit their 'public' account of what they thought they should say, with most doctors reeling off diet (fats and salt), reduce weight and smoking. Nevertheless the content of their beliefs and messages appeared to vary. Some doctors, for example, rejected the importance of reducing salt intakes whereas others emphasized this, which probably reflects the general uncertainties in the scientific literature (see chapter 1). Similarly, six doctors mentioned the importance of avoiding stress, relaxing and resting, although the value of this was not endorsed or advanced more generally. A few doctors also mentioned that they usually advised hypertensive patients to take exercise although this was not generally advocated.

The majority of general practitioners appeared to adopt a fairly laissez faire attitude to the achievement of changes in consumption and behaviours unless a hypertensive patient was particularly at risk as a result of their overweight or smoking. They justified this by saying that they didn't want to restrict people's lives too much, that 'you need time and leisure to start thinking about diet and a lot of people in this area are just snowed under', and that they were not sure that patients would take any notice of such advice. In contrast, a small number of general practitioners adopted a broader and more aggressive approach, particularly in relation to smoking. For example, one doctor described himself as generally 'jumping up and down about smoking'. General practitioners did not identify any differences in responses to health education advice among hypertensive patients from different ethnic groups, with the exception of the particular problems experienced by overweight Afro-Caribbean women for whom controlling their weight often required major changes in dietary patterns and the avoidance of many traditional foods such as yams. However in general they did not think that patients paid much attention to advice in this area.

It thus appeared that although hypertensive patients were perceived, perhaps inaccurately, as not responding to advice on diet and life style, that this was not viewed by doctors as a major problem of 'non-compliance', for with the exception of a few doctors who assigned considerable importance to stopping smoking most did not view the achievement of dietary and other behavioural changes as a particular goal for them as doctors and were willing for patients to make their own choices. This corresponds with the findings of other studies which indicate that the majority of general practitioners do not assign a high priority to their role as health educators and rarely provide this in a systematic way, even in those consultations in which patients presenting problems provides them with an opportunity to do so (Calnan, 1991).

Comparison of doctors attitudes to drug therapy and non-pharmacological approaches to the reduction of cardiovascular risks thus identifies differences in expectations and definitions. Non-compliance which forms a provider-constructed category of unacceptable patient or client behaviours is therefore more likely to be perceived by doctors as a problem in relation to drug therapy than life style changes, although both affect cardiovascular risks. This draws attention to the way in which non-compliance can be viewed as much a status ascribed by providers, as it is a status achieved by clients. As Fineman (1991) observes, 'it has as much to do with the values, attitudes and beliefs underlying providers' expectations and assessments as it does with their clients behaviours'. Those designated as non-compliant are thus very much a product of these categories. For example, large numbers of Afro-Caribbean respondents are 'non-compliant' in that they do not fulfil a medical expectation regarding drug therapy, although they attend the doctor's surgery regularly to monitor their blood pressure and adopt various alternative measures in its control.

Chapter 7

DISCUSSION

This chapter draws together and develops some of the themes that have emerged from the research. It first identifies what from this and other studies appear to be general features of lay views or 'collective representations', and then considers the variations in beliefs and responses that occur among ethnic and social class groups. The variety of 'expert' models within the professional arena and the relationship between professional and lay perspectives are then examined. Finally, the implications of the findings are considered in terms both of preventive strategies and individual patient care.

Collective representations

Despite the diversity of lay perspectives, some common themes are emerging from studies based on different medical conditions and different patient or lay groups and appear to form what Durkheim (1912) termed 'collective representations' or common images and patterns of beliefs prevalent in society. These collective representations may derive from various sources, including the influence of medical and scientific knowledge and broader beliefs and ideologies in society. Three collective representations identified in this study as characterising all social groups are the lay emphasis on stress as a 'cause' of disease, the social meanings surrounding particular medical conditions, and what appears to be fairly widespread concerns about the possible harmful side-effects of long-term medication.

The causes of ill health poses a problem both for individuals and for society and is therefore surrounded by general societal (and sub-cultural) beliefs. A pattern demonstrated not only by this study but also by studies of hypertensive patients in the US (Blumhagen,

1980) and of the general population in England (Cox et al, 1987) is the tendency among lay people across all age, gender and social class groups and for different ethnic groups to identify stress and tension as a cause of high blood pressure and cardiovascular disease. Despite this emphasis, the scientific evidence for the role of stress as the initial cause of long term elevations in blood pressure is still fairly scanty and inconclusive, and is rarely listed as a cause of high blood pressure in clinical texts. Furthermore stress has also been identified as a cause in relation to a range of other conditions whose precise aetiology is unclear, including cancer (Calnan, 1987) and arthritis (Williams, 1986). This suggests that the lay attribution of stress as a cause of ill health forms a general phenomena. Further evidence of this is provided by the Health and Lifestyle Survey (Cox et al, 1987; Blaxter, 1990) which showed that about a fifth of respondents emphasized 'stress' or other psychosocial concepts when talking about the causes of ill health in general. Blaxter also observes that 'this emphasis on the psychosocial influences on health, among men and women in their 40's and 50's is a trend which appears again and again in this survey' (p. 158).

Some writers attribute this emphasis on stress to particular features of modern industrial society, including the increased pace of life, its greater competitiveness and the breakdown of community ties, which produce much higher levels of stress than were formerly experienced and contribute to the major causes of disease in modern society (Eyer, 1975). A rather different view is taken by Pollock (1988). She acknowledges that it is only in the last few decades that the concept of stress, its relationship to ill health, and its ubiquitous presence in the world have become established. However she believes that this largely reflects the influence of the elaboration of the 'scientific' concept of stress on lay views, rather than the increasing prevalence of social stress associated with changes in the structure of society. She points out that the concept of stress although originally a product of social and behavioural science research has been widely popularised, and believes that as a result it has come to be seen as if it is something that occurs naturally in the world and has assumed the status of a 'social fact'. As such it has direct implications for the ways in

which people perceive their world and act within it. Pollock believes that the widespread popularisation of the concept can be related to its ideological functions, in that it can serve to deflect attention away from the limitations of modern medicine. It also deflects attention from structural inequalities in society, for the damaging effects of stress can be regarded as largely a function of the social resources an individual has and especially a supportive social network. In broader terms, Herzlich and Pierret (1987) regard stress as one aspect of the 'modern way of life' which is at the core of our representations concerning the causality of biological disorder, and has become an integrative notion associated with different causes, including environmental pollution, an unhealthy diet, foods contaminated with chemicals, and nervous tension, worry and stress. As they explain:

'The collective representation of a harmful way of life serves as a framework to integrate bits and pieces of information gleaned from the corpus of scientific knowledge and the medical debate, but these can only be assimilated and assume a meaning because they match already existing sociosymbolic schemata.' (p. 117)

Patients' beliefs about stress as a cause of ill health, and particularly of high blood pressure and cardiovascular disease appear to be to some extent shared by many practitioners who themselves endorsed the role of stress, although not necessarily identifying this as the sole cause of high blood pressure. They also sometimes suggested this as a cause of high blood pressure to patients both through the questions they asked when diagnosing this condition, and the recommendations they gave for patients to rest, relax and keep calm, as a means of controlling their blood pressure. Suggestions of the possible role of stress whether conveyed by doctors or the media may then be subsequently confirmed in people's minds through the effects of anxiety states in producing temporary exacerbations in blood pressure. Thus for people with high blood pressure, general societal beliefs, the information communicated by doctors, and their own experiences of the effects of their psychological state on their blood pressure, may all serve to suggest and endorse the importance of stress and tension as a 'cause'.

A second aspect of the collective discourse highlighted by responses in this study is the social images and meanings surrounding particular medical conditions. Confirming Sontag's (1979) analysis, cancer was identified as the most feared and dreaded condition in view of the pain and slow death associated in people's mind with cancer and what is seen as its incurable nature. In contrast, a heart attack was regarded as a quick and relatively desirable death and not as something to be feared. Stroke did not appear to be imbued with either positive or negative social meanings. This may reflect the general lack of media interest in this condition, because unlike heart disease or cancer it is regarded as predominately a condition of old or very old age, and the existence of campaigns focussing specifically on heart disease, such as 'Look After Your Heart'. Stroke also does not evoke the glamour of acute medical interventions for heart conditions, such as resuscitation by 'crash teams' following cardiac arrest, coronary artery by-pass grafts and heart transplants.

The social images surrounding particular medical conditions are not static, with changes over time being influenced by medical advances, epidemiological risk assessment, and broader cultural attitudes and interpretations (Waxler, 1981; Payer, 1989). It is possible that the increased emphasis currently being given to the prevention of stroke in policy documents, such as the Health of the Nation (Secretary of State for Health, 1992), will lead to the development of a collective image of this condition. However, its precise nature will depend on the portrayal of stroke in public presentations.

A third common theme is people's fears of long-term harmful effects of drug therapy. This characterised respondents' accounts across social classes, gender and ethnic groups, although it appeared to be most strongly held and of greatest significance for many of the Afro-Caribbean respondents. These feared effects involved notions of a physical and psychological dependency on drugs, and concerns about possible future adverse drug reactions in terms of unexpected side-effects and side effects of a relatively serious nature.

Similar concerns have been reported in relation to very different medical conditions, including arthritis, epilepsy and asthma, and for patients in the United States and Sweden as well as in England (Arluke, 1980; Conrad, 1985; Fallsberg, 1991). Fallsberg in a study in Jutland, Sweden, quantified the prevalence of concerns about current side effects and anticipated side effects among 90 people treated for asthma, hypertension or chronic pain. She found that only 7% of her sample reported current side effects, but nearly one-half (49/90) anticipated side effects at a future date. As Fallsberg (1991) observes, the prospect of continuing medication for an indefinite period causes patients to think and reflect a lot on possible side-effects, and that

'Few people are indifferent when faced with the effects of drugs. A yearning for the anticipated effect and fear of side effects are combined with an air of mystery surrounding the effects of medicines.' (p. 41)

This underlines the frequent intertwining in people's minds of the powerful and positive effects of drugs in producing a cure or alleviation of symptoms with their potential for producing harmful effects. This may partly derive from media presentations of serious adverse reactions (ie. unexpected and serious side effects), as with the thalidomide tragedy in the 1960s, the effects of Oprelvekin in elderly people in the 1980s, and the scares about the contraceptive pill. In Sweden, patients also receive direct information in the form of leaflets regularly handed out at pharmacies when dispensing prescribed drugs. These were referred to by several respondents in Fallsberg's (1991) study as 'warnings' of side effects. In the UK patient information leaflets are to be introduced in response to an EC directive. They will take the form of shortened and much simplified versions of the drug warnings now supplied to doctors by the manufacturers, but as Medawar (1992) comments, their quality remains to be seen. More generally, modern society is probably characterised by an increasing concern about the risks associated with chemical products, whether in the form of pharmaceutical products, X-rays, food additives, artificial fertilisers and other technological developments. This is also accompanied by an increasing questioning of professional authority in all areas of life, and a recognition that medical professionals

knowledge may be limited and that some harmful effects of treatment are not yet known about. For example, Calnan and Williams (1992) in a community study of people aged 18 years and over in Kent found that 13% described themselves as having 'not very much' faith in doctors, and the proportion of people willing to accept certain drugs and procedures 'without question' ranged from 54% for antibiotics to 8% for tranquillisers. In addition, not more than 30% accepted without question the four surgical procedures studied - hernia operation, bowel cancer operation, hip replacement, hysterectomy. The authors conclude that the notion of 'blanket dependence' or acceptance of modern medicine by the public is far too simplistic. Instead views differ according to the specific interventions considered and often encompass both positive and negative aspects.

A few recent studies have thus identified what appear to be general societal concerns about medical interventions and drug therapies, and especially in relation to possible long-term harmful effects of drugs and 'unnatural' interventions with such concerns being particularly pronounced among people less accustomed to western medicine. In contrast what appears to be patients' limited concern and reporting of current side-effects may often reflect their difficulty of defining and recognising these effects and their accommodation and acceptance of symptoms, rather than the absence of drug side-effects which may be considerably under reported. It suggests that the precise meaning of this term and the process of evaluating, interpreting and responding to symptoms requires further study, rather than forming a taken-for-granted category. This relates to medical practitioners as much as patients, with each group being involved in interpreting symptoms and defining side-effects in terms of their own knowledge, criteria and beliefs.

Lay perspectives among social groups

One of the questions addressed by this research is the extent to which meanings and responses to hypertension and its treatment vary among socio-economic and ethnic groups. The interviews with White patients from different socio-economic groups showed some expected differences in their medical knowledge in terms of their understanding of the term

'hypertension' and of the physiological mechanisms involved in high blood pressure. However what was more pronounced was the similarity in the patterns of beliefs and responses of groups drawn from differing socio-economic stratum, including their notions of the causes of this condition, the worries they experienced, and their high level of adherence with drug therapy. This may partly reflect a selective effect, since the study only focuses on those people who formally remain under treatment. However it also points to important aspects of a shared lay culture and general collective representations in society that form common stocks of knowledge that are drawn on to explain and cope with problems of illness. Furthermore, although there were considerable differences in material resources between the two groups this appeared to have few implications for their experience and responses to hypertension, apart from the suggestion that high blood pressure is more likely to lead to time off work in some manual occupations which involve the use of machinery or passenger safety. The relatively limited impact of the differences in material resources between the two socio-economic groups reflects the nature of hypertension which is generally an asymptomatic condition ~~that~~ does not give rise to significant disability or social disadvantage.

Support for the notion of the increasing homogeneity across social classes in beliefs and responses to medical diagnosis and treatment is provided by Blaxter and Paterson's (1982) study of two generations of mothers in Aberdeen from unskilled and semi-skilled occupational backgrounds. Although both generations of women held fairly restricted definitions of health, the younger generation of married women were less likely to use home remedies and held similar views and expectations of the formal health care system as the more general population. The authors conclude that intergenerational changes are inextricably bound up with changes in life styles and circumstances, changes in the provision of services, and general changes in public attitudes, and regard their findings as challenging the notion of the perpetuation of a distinct culture based on familial transmission. In particular scientific medicine and its attendant assumptions plays a major role in shaping the ideas and images that become part of lay knowledge and provides a

common culture. Similarly, the existence for over forty years of a publicly provided health service with universal coverage and which is free at the point of use, means that this has become part of the general culture and experience of all social classes. Thus although there remain some differences in knowledge and expectations of health and health care across social classes, the major differences in experiences and responses to illness now appear to relate directly to situations where inequalities in material resources exert a major influence (Blaxter, 1990).

The general pattern of lay beliefs and responses to hypertension (although not necessarily their precise prevalence) also showed considerable similarity between men and women. This again reflects the influence of the dominant lay culture, as well as the absence of gender stereotypes in relation to high blood pressure. This condition also had few implications for social roles which might have a differential impact for men and women. One of the few gender related differences in patterns of responses was in their perceived causes of stress. Women were more likely to identify family problems and relationships whereas men more commonly identified problems of work or unemployment. In contrast to expectations, few of the women were employed as nurses or in other health care positions, which was regarded as a possible influence on their beliefs and behaviours.

The findings of the fairly limited influence of gender on beliefs and responses to hypertension do not challenge the existence of differences in health orientations between men and women, or of the differing implications of ill health for their social roles (Miles, 1991). Instead it suggests that the pattern of beliefs and responses to a condition which is largely asymptomatic and is not invested with gender specific images appear to be fairly uniform among men and women as 'patients'. There may however have been important differences in their initial illness behaviours, as well as in their supportive roles in terms of providing advice or care for a spouse or other relative being treated for hypertension.

The main differences in lay perspectives appeared to occur along ethnic lines. One feature of the Afro-Caribbean's beliefs was their tendency to 'normalise' the condition and to accept their fate, thus displaying an external locus of control. This attitude may reflect broader sub-cultural values, including the influence of their religious beliefs on an acceptance of their fate or destiny. They were also more likely to attribute their high blood pressure to stressful circumstances than their White counterparts, which may partly reflect the particular conditions of life of minority groups including problems of acceptance and racism and their separation from their wider kin and network and early environment. However it is not clear how far their beliefs were due to differences in their objective circumstances and how far this reflects differences in their perceptions of their circumstances and views of illness causation. Similar problems of interpretation occur in relation to the finding that Afro-Caribbean respondents were more likely to feel they could tell when their blood pressure is up and to report symptoms. This may reflect underlying physiological responses, possibly associated with the drugs prescribed or their irregular use, or stem from differences in their perceptions and interpretation of this condition and perhaps a greater readiness to link general symptoms with their high blood pressure.

A major difference in the responses of Afro-Caribbean patients was what appeared to be their low level of adherence with the prescribed drugs, mainly arising from the large numbers who regularly 'left off' the medication. This practice appeared to largely reflect the Afro-Caribbean respondents' greater concerns about the possible harmful effects of the drugs in terms both of their toxicity and unexpected side effects, as well as their fears of becoming 'addicted' to or 'dependent' on the drugs. Although a general dislike of taking drugs and concerns about their harmful effects was also evident among many White respondents, this seemed to be outweighed (at least among those who remained in treatment) by their views of the positive effects of the drugs in reducing risks of heart problems or a stroke. For the Afro-Caribbean respondents, the relative balancing of the costs and benefits of drug use may have been given a differing emphasis as a result both of

their greater acceptance of high blood pressure and its possible risks, as well as their greater fears and concerns about the prescribed drugs and particularly their worries about possible long-term harmful effects. This may have been partly associated with racial differences in physiological responses and tolerance of drugs, or in general practitioners prescribing for Afro-Caribbean patients. However there was also evidence of the influence of their traditional beliefs and folk practices and thus of sub-cultural patterns. In particular the prescribed drugs were viewed as both more powerful and more harmful than the 'natural' herbal remedies which formed their traditional way of preventing and curing ill health and continued to be taken by many Afro-Caribbean respondents. Similarly their experience of paying to see a general practitioner in Jamaica was associated with the seeking by some people of private consultations with a general practitioner to discuss their condition more fully and check on the drugs prescribed and diagnosis given by their NHS doctor. However although for many Afro-Caribbean respondents their traditional beliefs and practices deriving from the 'folk' arena were intermeshed with those of modern medicine and the dominant lay culture, a proportion of the Afro-Caribbean respondents rejected the use of herbal remedies and appeared to exhibit similar beliefs and practices as the White population. This may reflect differences either in their earlier experiences and familiarity with Western medical systems, or in their level of assimilation and adoption of the dominant cultural values in the UK.

The generalisability of the study findings in terms of the way in which the beliefs and practices of Afro-Caribbean respondents frequently differed from wider cultural patterns has been confirmed by a larger quantitative study undertaken as a project for the MSc in General Practice (Mhlongo, 1992). This study specifically aimed to test the main findings of the current research by means of a postal survey. Questionnaires were sent to 525 hypertensive patients aged 35-66 who were registered with three practices in north west London and one in Dagenham. Responses were received from 224 Whites and 203 Afro-Caribbeans (85%). Confirming the findings of the present study, the responses to the postal survey showed that Afro-Caribbeans were more likely to believe that stress, worry and

tension caused their hypertension compared with the White patients (87% compared with 74%). Afro-Caribbeans also complied less often with medication instructions, with 43% taking it as prescribed compared with 83% of the Whites. This was due both to their regularly cutting down on the drugs (29% compared with 4%) and their tendency to 'leave off' the medication (33% compared with 1%), with these differences between groups being statistically significant. The Afro-Caribbeans also frequently reported using herbal remedies to 'control' their blood pressure and expected their doctor to check their blood pressure even during visits to the surgery for reasons other than blood pressure. The main difference in findings between studies was that when specifically asked whether the anti-hypertensive drug therapy had reduced or destroyed their sex-life, 40% of the Afro-Caribbeans admitted to this in the postal survey compared with 15% of the White respondents. In contrast, no question was specifically asked on this in the present study and the information was often not volunteered in the face-to-face interviews.

For the future, the younger generation of people born to Afro-Caribbean parents and who have lived in the U.K. for their entire life are less likely to subscribe to the traditional beliefs and practices of their parents, including the use of herbal remedies. Indeed, many Afro-Caribbean respondents commented on their children's lack of interest in herbal remedies and dislike of the bitter taste. However, whereas the younger generation are less familiar with the traditional Afro-Caribbean remedies and health care system and in these terms exhibit a higher degree of cultural assimilation, there is some evidence that the younger generation are placing a renewed emphasis on their ethnic identity and sense of 'peoplehood' in response to what they perceive as their disadvantaged social position (Billington et al, 1991).

In addition to intergenerational changes are the differences between ethnic groups in their beliefs and practices, reflecting their own cultural traditions, and their familiarity with the western medical system and degree of assimilation into British society and culture. This is illustrated by Donovan's (1986) study of the meanings and experiences of health, ill

health and health care among two groups of people living in north and east London - Afro Caribbeans in manual occupational and Asians in predominantly middle class occupations. The Afro-Caribbeans demonstrated similar beliefs and uses of herbal remedies as in this study, whereas the Asian respondents preferred to rely on western trained doctors and drugs and rarely practiced alternative methods of health care. However this may partly reflect the influence of class, Asian immigrants from fairly poor rural communities, such as the Bangladeshi community in Tower Hamlets, may exhibit beliefs and responses to medical diagnoses and treatments that differ markedly from the dominant lay perspective, in view of their limited experience of western medical systems in their country of origin, their low level of education, and tendency to live largely within their own community in Britain relatively isolated from the broader culture.

Recognising the interaction of social position and ethnicity in determining beliefs and life experiences, Gordon (1964) introduced the term 'ethclass' to describe the groupings created by the vertical stratification by ethnicity and the horizontal stratification by social class. He described the ethnic group as providing a sense of historical identification and the ethclass as the locus of a sense of participational identification. As he explained:

'With a person of the same social class but of a different ethnic group, one shares behavioural similarities but not a sense of peoplehood. With those of the same ethnic group but of a different social class, one shares the sense of peoplehood but not behavioural similarities. The only group which meets both of these criteria are people of the same ethnic group and the same social class.' (p. 53)

As already noted, the significance of ethnicity in terms of beliefs and responses to medical conditions and treatments is likely to be most pronounced among the more disadvantaged stratum, which can be viewed as composed of a large number of 'ethclasses' with their own cultural traditions and approaches to healing. As Billington et al (1991) state:

'The existence of class fractions and differentiation within classes would

seem to point towards a complexity and duality of cultures and subcultures, which does not accord with the limited notion of class used in most of the studies of class and culture to date.' (p. 108)

Studies focusing on these cultures and subcultures, and particularly of groups defined in terms of ethnicity thus contribute to an understanding of the nature of social differentiation in contemporary society, and to within class differences in beliefs, life circumstances and behaviours. The existence of distinct subcultural patterns in health beliefs and health related behaviours also points to the importance of bridging the cultural gap between health services based on the assumptions of biomedicine, and the beliefs and practices of people from ethnic minorities whose own explanatory models may depart from those of the general lay culture.

Practitioners' explanatory models

Whereas doctors beliefs are more strongly embedded in medical science than those of patients, there was considerable variability in their management of hypertension. This occurred in the technical aspects of care, such as the blood pressure threshold for diagnosis and treatment and the drug therapy prescribed, in the social and personal aspects of care in terms of the information communicated to patients and responses to non-compliance, and in the importance assigned to non-medical measures in preventing cardiovascular risks. Patients' chances of being diagnosed and treated for high blood pressure thus varies considerably between individual doctors, as does the information and advice they receive once they become a 'patient'. This situation contrasts with the controlled conditions which generally exist in a clinical trial. Indeed the differing information, reassurance and meanings conveyed by doctors forms a relatively neglected input contributing to the variations in patients' beliefs and responses.

The demonstration of variations between practitioners in the management of hypertension forms a further example of the more general clinical variability (see Chapter 1). This partly reflects the differential rates of adoption of new practices. The early adopters

endorse new ideas or forms of treatment that have not yet become widely accepted and part of general professional practice. However at the other end of the distribution, and a cause of concern, is the slow rate of adoption by some doctors of what is regarded as optimal practice. For example considerable numbers of general practitioners appear to be employing blood pressure thresholds for beginning drug treatment that are considerably lower than are currently recommended in the UK. Another major form of variation was the differences between individual doctors in their styles of practice, as demonstrated by doctors' beliefs and approaches to non-compliance with drug therapy. Such behaviour was viewed by some doctors from the patients' perspective and tolerated at lower blood pressure levels, given their recognition of the relatively low risks and hence benefits for these individuals. Other doctors adopted a more traditional medical view and regarded non-compliance with drug therapy at any blood pressure level as unacceptable deviance. In contrast to this emphasis there was much less concern about non-compliance with non-pharmacological measures, reflecting the lesser importance attached to these activities by doctors. This illustrates the way in which deviance is provider defined, with definitions varying between activities and among doctors.

There was no clear relationship between approaches to the management of hypertension and particular characteristics of doctors, such as single-handed versus group practice, age of doctor, and country of qualification. This may partly reflect the relatively small numbers of general practitioners studied, although even much larger studies examining specific aspects of care, such as referral rates, have not satisfactorily accounted for variations among individual general practitioners. There was also no consistent relationship between different aspects of practice, although there was some indication that general practitioners who adopted a higher and more flexible threshold for beginning drug therapy were often more tolerant of non-compliance at lower blood pressure levels. This tolerance appeared to reflect these doctors' awareness of the fairly low risks of cardiovascular disease at these blood pressure levels, and suggests that one factor contributing to the variations in doctor's management is likely to be the changing recommendations for treatment and the differences

in the knowledge they possess, and especially of the recent findings of the MRC trial of mild hypertension (MRC Working Party, 1985). Other factors include their own personal beliefs and evaluations of the physical and psychological costs and benefits of drug therapy, and their more general orientation to patient care, which may involve a participative patient-oriented approach or the more traditional guidance-cooperation relationship (Byrne and Long; 1984). Another possible influence on practitioners' views and approaches may have been their own country of origin. One-fifth of the general practitioners interviewed gaining their medical qualifications overseas, mainly from Ceylon, and may thus have had greater knowledge of and acceptance of folk practices as well as bringing different general beliefs and values to the cognitive and emotional processing of medical 'facts'.

An understanding of relationship between doctors' country of origin and their beliefs and practices requires more detailed study, as do questions of the factors influencing their rate of adoption of new scientific findings and guidelines and more general orientation to patient care. This study while not accounting for these variations nevertheless underlines the variability that exists in general practitioners' diagnosis and management of high blood pressure which has implications for patients' initial diagnosis of high blood pressure. This in turn means that it is difficult to identify 'the' medical view within the professional arena, for at any one time there exist the most recent understandings derived from the scientific literature, as well as prevailing professional knowledge and practice as presented in clinical texts, consensus statements and guidelines, and the knowledge and practices of individual practitioners. This multiplicity of views and practices within the professional arena and the autonomy traditionally enjoyed by medical professionals has led to problems in agreeing and implementing common guidelines and protocols which aim to encourage the more rapid dissemination and adoption of optimal practice (Grol, 1992; Pringle, 1992). A top-down approach based on the current wisdom among professional bodies and 'experts' in the field does not necessarily accord with or prove acceptable to the

majority of practitioners, while a bottom up approach based on a consensus among practitioners does not necessarily reflect optimal practice (Stocking, 1992).

Another general theme that emerged was the degree of overlap between practitioners and patients perspectives, rather than each existing in what Freidson (1970) referred to as distinct and separate worlds. This reflected both patients' knowledge and identification with medical categories and forms of thought, and medical practitioners awareness and often sharing of the beliefs and concerns of their patients and the broader lay culture. As Davison et al (1989) observe:

'In contemporary Britain, medical notions concerning health and illness merge almost imperceptibly with more popular ideas. Indeed, the interpretation of medical and popular discourse in this area calls the traditional distinction between professional and lay notions into question The non-professional majority are habitual users of the medical idiom when illness is under discussion, and the professional majority remain members of the wider society, sharing the common framework of cultural and moral norms. There is a constant interplay between professional and non-professional concepts in the fields of health and illness,

(p. 329).

The pattern that emerges is thus not of a simple convergence or divergence between practitioners' and patients' explanatory models. Instead there is considerable variation within both groups, both in their personal beliefs and practices and in doctors' awareness of patients beliefs and concerns. This study did not link individual practitioners and patients and can therefore not fully assess the extent of the communication gulf. However this appeared to be greatest where doctors adopted a 'disease' rather than a patient or 'illness' oriented approach and in relation to Afro-Caribbean patients, whose explanatory models and practices often reflected their traditional culture and were not always revealed to their doctor.

In terms of the popular arena, the beliefs and behaviours of patient groups are rational when viewed in the context of their particular circumstances, wider beliefs, and experience

of 'illness'. Moreover what may be regarded as inappropriate patient behaviours by many practitioners may nevertheless sometimes be supported by evidence from the scientific literature. One example relates to people's assessment of the costs and benefits of anti-hypertensive treatment. The decision to drop out of treatment by people with mild hypertension and no other risk factors can be regarded as more closely reflecting their individual risks and beliefs of treatment than do treatment strategies deriving from a concern with population risks and benefits (Rose, 1985). There is also scientific evidence demonstrating that normal blood pressure once attained may be maintained in the absence of long-term treatment (Fletcher, 1988), lowering blood pressure too far may also have adverse effects (Cruickshank et al, 1987). A few practitioners, who are possibly aware of this scientific evidence, acknowledged that it is sometimes possible to take people off hypertensive drugs and therefore did not regard treatment as life-long, in contrast to more general current professional views. Thus in this instance the behaviours of some patients, in terms of dropping out of treatment when their blood pressure is controlled, accords with the views of a minority of practitioners and has some support in the scientific literature, although not currently forming accepted professional practice. It is possible that in the future other aspects of patients' beliefs and behaviours which tend now to be classified as 'deviant', will receive scientific backing and endorsement by practitioners. For example, the reporting by patients that they can tell when their blood pressure is 'up' may be shown to accord with a clinical reality, and patients concerns about the possible harmful effects of long-term pharmacological treatment may receive scientific confirmation and acknowledgement by professionals.

More generally, the analysis of beliefs and practices in relation to hypertension emphasizes the changing nature of medical knowledge and the different 'experts' and 'truths' that exist at any one time. Patients' beliefs about the cause and appropriate management of their medical condition thus merely forms one aspect of this complex and changing medical reality, while the designation of patients' beliefs and practices as deviating from the medical perspective over-emphasizes the consensus within medicine.

Instead there exist multiple perspectives each with their own claims to 'expert' knowledge and access to the truth.

Prevention and management of hypertension

In terms of outcomes, the experiences of hypertensive patients in this study does not provide evidence of the severity of labelling effects at either a psychological or behavioural level reported by many North American studies. This may reflect differences in cultural attitudes to health and the meanings of hypertension as well as in service provision, and particularly the information and reassurance communicated by doctors (Chapter 1). Nevertheless substantial numbers of people with this diagnosis did appear to experience some worry. This mainly arose from people's awareness of their increased risks of a heart attack or stroke, and from a dislike of taking drugs on a long-term basis which may often extend for over 10 or even 20 years. This is both because of their effects at a symbolic level in reminding people of their medical condition and their concerns about the possible long-term harmful effects of drugs. Similarly, although there was little evidence of changes in major activities and entry into a sick role, large numbers of people rested more and reduced their pace of life. This appeared to be a direct response to feelings of fatigue, headaches, giddiness and other symptoms, as well as a preventive measure based on their beliefs about important ways of controlling their blood pressure and reducing risks of symptoms.

There are thus a range of costs to patients of the medicalisation of blood pressure. However their nature suggests that assessments require to be based on quality of life measures that are sensitive to changes and encompass physical, psychological and social well-being, rather than relying on traditional measures of psychological and behavioural outcomes. Although the implications for individuals are generally in terms of some reduction of their quality of life rather than a major change in social roles, their total impact is likely to be considerable given the large numbers of people involved. Furthermore these costs assume particular importance for the many people with only mild levels of hypertension whose

risks are therefore small, with this also applying to other asymptomatic conditions such as cholesterol testing. However as Rose (1992) observes, although the effects of 'labelling' should constitute a prominent item in the balance-sheet by which a screening policy is assessed, many authoritative reviews show no evidence that the problem even exists, and cites as an example the official British statement on blood cholesterol testing issued in 1990 by the Standing Medical Advisory Committee.

One response to the costs to patients of the diagnosis and treatment of risk factors is to regard this as justifying greater emphasis on a population strategy designed to achieve a shift in the whole risk factor distribution in a favourable direction. It also points to a need for being more selective in terms of the identification and treatment of at risk individuals. One way of achieving this is to ensure the more widespread adoption of the higher thresholds for drug treatment that have been advocated following the MRC trial (MRC Working Party, 1985), and to take greater account in treatment decisions of the presence of associated risk factors for cardiovascular problems which is facilitated by the development of formal risk scores (Wilson and Morrell, 1991). Another approach is to move from a purely doctor-based assessment of requirements for treatment to the greater involvement of patients, especially as in contrast to immunisation, the treatment of hypertension does not affect the health prospects of others and thus justifies greater individual autonomy. This would involve doctors in explaining the nature and risks of the condition and its treatment, and allowing patients to decide whether they wish to start drug therapy. This strategy affords some protection against a tendency to over-medicalise and would relate treatment more closely to patients' evaluation of 'risks and benefits' in terms of their own values and lives. Although patients are currently aware that blood pressure is associated with increased risks of a cardiovascular event, they are unlikely to have known of the precise risks involved. Indeed, patient choices based on such knowledge might differ significantly from the treatment recommendations of many general practitioners which derive from a population perspective.

Other approaches involve reducing the impact of the diagnosis through the information conveyed to patients by general practitioners, as well as a greater emphasis and assessment of the possibilities of taking people off medication when their blood pressure is controlled and stable.

A second main focus of the research relates to the 'problem' of patients' 'compliance' with drug therapy. The findings draw attention to the differing views and expectations among both practitioners and their patients and to issues of the meanings of 'compliance' from these perspectives. They also indicate that among people who formally remained in treatment 'non-compliance' with drug therapy was largely confined to the Afro-Caribbean respondents and appeared to be related to beliefs and medication practices that reflected elements of their traditional culture. Their beliefs and practices were not generally communicated to general practitioners, because as with patients generally, they were aware of their doctor's expectations and wished to 'protect' both themselves and their doctor from problems arising from a conflict of beliefs or perspectives. One outcome was that general practitioners were often puzzled by what appeared to be the less adequate blood pressure control among their Afro-Caribbean patients. They also frequently made statements about patients' blood pressure level which were confusing when interpreted by patients in the context of their own personal pattern of medication use and could have the effect of reinforcing 'deviant' behaviours. This irregular use of the prescribed medication occurred at relatively high as well as at lower blood pressure levels and may thus contribute to the relatively high rates of stroke among Afro-Caribbeans. Interestingly, although various explanations of the high rates of stroke among Afro-Caribbeans have been put forward (including differences in the type of hypertension experienced, differences in physiological responses to some drugs, the high incidence of diabetes and obesity, and high salt intakes), the possible contribution of differences in medication behaviours to both the reported difficulties in controlling blood pressure among Afro-Caribbeans and their higher rates of stroke does not appear to have received attention (Saunders, 1991). This underlines the importance of overcoming the communication barriers between general

practitioners' and their Afro-Caribbean patients', thus enabling doctors to respond more effectively to patients' concerns. This approach was demonstrated in two practices where the findings of the study were presented. Subsequently, several doctors reported that their increased understanding of their patients perspective allowed them to engage in more open communication with their Afro-Caribbean hypertensive patients. They regarded this as promoting a more satisfactory doctor-patient relationship, with possible consequences for patients' behaviours and the effectiveness of medical care. This corresponds with the findings of a study by Inui et al (1976) in which doctors were given a single training session about the nature and importance of hypertensive patients health beliefs. This training session was found to have the desired effect in that the doctors allocated more time discussing their patients' ideas, and patients were subsequently found to be more compliant with drug regimens and to have better blood pressure control than patients in the control group. However the present study indicates that promoting communication across cultural groups often requires that doctors have some prior understanding of the particular beliefs of ethnic minorities, otherwise the information conveyed by patients is likely to be limited to the less threatening realm of their public accounts.

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APPENDICES

Appendix A

TABLES

Table 1

KNOWN RISK FACTORS FOR CORONARY HEART DISEASE AND STROKE

Risk Factor	Relationship to	
	Coronary heart disease	Stroke
'Classical' risk factors		
Cigarette smoking	Causal	Causal in association with oral contraception Association recently shown for other kinds of stroke too
High blood cholesterol	Causal	Unclear relationship
High blood pressure	Causal	Causal
Other risk factors		
Obesity	Possibly causal but acts mainly through other risk factors	Causal
Diabetes	Probably causal	Causal
Physical inactivity	Probably causal	?
Social class	Independent association	Association
Psychosocial factors	Strong independent association with lack of social support, work stress	?
Heavy alcohol consumption	Strong independent association	Strong independent association
Soft tap water	Association	?
Family history	Strong association	?

Source: Jacobson, Smith, Whitehead (1991)

Table 2**CLINICAL TRIALS OF DRUG TREATMENT FOR MILD HYPERTENSION IN YOUNGER ADULTS****A. Design of trials**

Trial	No. subjects recruited	Age range (years)	Diastolic BP at entry (mm Hg)	Mean (or range) duration of follow-up (years)
USPHS ⁽¹⁾	389 (men)	21-52	90-104	(6.5 - 9.0)
Oslo ⁽²⁾	785 (men)	40-49	95-109	5.5
Australian ⁽³⁾	3427	30-69	95-109	4.0
MRC ⁽⁴⁾	17354	35-64	90-109	5.5

B. Number of cerebrovascular disease events

Trial	Morbidity		Mortality		Total	
	Treated	Control	Treated	Control	Treated	Control
USPHS	0	2	0	0	0	2
Oslo	0	3	0	2	0	5
Australian	10	16	3	6	13	22
MRC	42	82	18	27	60	109

C. Number of coronary artery disease events

Trial	Morbidity		Mortality		Total	
	Treated	Control	Treated	Control	Treated	Control
USPHS	6	5	2	2	8	7
Oslo	8	8	6	2	14	10
Australian	28	22	5	11	33	33
MRC	116	137	106	97	222	234

⁽¹⁾ Smith (1977)⁽³⁾ Management Committee (1980)⁽²⁾ Helgeland (1980)⁽⁴⁾ MRC Working Party (1985)

Table 3

CHARACTERISTICS OF PATIENTS

		Working Class		Middle Class
		Afro-Caribbean (N = 30)	White (N = 30)	White (N = 16)
No. years lived in local area				
Under 5		2	1	3
5-9		11	5	3
10-19		6	8	6
20 & over		11	16	4
Age				
35-44		12	10	6
45-55		18	20	10
Employment status				
Men:	Employed	12	11	8
	Not employed	3	4	-
Women:	Employed full-time	11	5	2
	Employed part-time	1	8	6
	Not employed	3	2	-
Home ownership				
Owner occupied		9	2	15
Council rented		21	20	-
Private rented/other ⁽¹⁾		-	8	1

(1) Prison warder's flat and housing association flat

(2) People had not necessarily been treated continuously since this initial diagnosis

Table 4**CHARACTERISTICS OF GENERAL PRACTITIONERS**

Practice size	No. general practitioners
1	6
2	3
3-4	7
5-6	5
Age	
Under 45	4
45-54	10
55-65	7
MB BS	
UK	17
Overseas	4
MRCGP	
Yes	10
No	11

Table 5

MEANINGS OF THE TERM 'HYPERTENSION'

	Working Class		Middle Class
	Afro-Caribbean (N = 30)	White (N = 30)	White (N = 16)
Same as high blood pressure	16	14	13
Don't know meaning	8	11	1
Stress, worry, tension	6	5	2

Table 6

PERCEPTIONS OF WHAT IS GOING ON IN THEIR BODY WITH HIGH BLOOD PRESSURE

	Working Class		Middle Class
	Afro-Caribbean (N = 30)	White (N = 30)	White (N = 16)
Blood not circulating properly	10	8	7
Blockage or hardening of arteries	3	2	4
Heart pumping too fast, under strain	9	11	10
Other	-	2	-
Don't know	12	11	3

Categories are not mutually exclusive

Table 7

PERCEIVED CAUSES OF 'THEIR OWN' HIGH BLOOD PRESSURE AND HIGH BLOOD PRESSURE 'IN GENERAL'

	Working class		Middle class
	Afro-Caribbean (N = 30)	White (N = 30)	White (N = 16)
Tension, worry, stress:			
A 'worrier'	-	9 (21)	3 (9)
Stressful events/circumstances	15 (19)	9	4
Familial, hereditary	5 (6)	3 (4)	4 (4)
Overweight	1 (1)	3 (8)	- (6)
Diet	6 (14)	- (1)	- (5)
Smoking	-	1 (1)	- (7)
Alcohol	1 (1)	2 (2)	- (8)
Other causes	2 (2)	3 (3)	1 (1)
Don't know	6 (1)	13 (7)	5 (4)
No. identifying cause	24 (29)	17 (23)	11 (12)
Mean no. causes reported	1.2 (1.5)	1.8 (1.7)	1.1 (1.6)

Numbers in brackets refer to high blood pressure 'in general'

Table 8

GENERAL PRACTITIONERS' OWN VIEWS OF THE CAUSES OF HIGH BLOOD PRESSURE AND PERCEPTIONS OF PATIENTS' BELIEFS

	Own views (N = 21)	Perception of patients' beliefs (N = 21)
Tension, worry, stress	6	12
Familial, hereditary	7	3
Overweight	6	3
Diet	2	1
Smoking, alcohol	4	1
Other causes	1	1
Don't know	9	7
No identifying cause	12	14
Mean no. causes reported	2.1	1.5

Table 9

REACTIONS TO INITIAL DIAGNOSIS OF HIGH BLOOD PRESSURE

	Working class		Middle class
	Afro-Caribbean (N = 30)	White (N = 30)	White (N = 16)
Shattered, shocked, very upset	4	5	2
Not very worried	5	22	12
Relieved	1	3	2

Table 10

CONDITIONS IDENTIFIED AS RISKS OF HIGH BLOOD PRESSURE

	Working Class		Middle Class
	Afro-Caribbean (N = 30)	White (N = 30)	White (N = 16)
Stroke	24	16	14
Heart disease	18	22	9
Don't know	1	2	1
Stroke and heart disease mentioned	11	7	8

Table 11

WORRY ABOUT THEIR HIGH BLOOD PRESSURE

	Working class		Middle class
	Afro-Caribbean (N = 30)	White (N = 30)	White (N = 16)
Often worry	1	6	1
Occasionally worry	10	11	3
Don't worry	19	13	12

Table 12

SYMPTOMS PERCEIVED AS INDICATING A RISE IN BLOOD PRESSURE

	Working Class		Middle class
	Afro-Caribbean (N = 30)	White (N = 30)	White ⁽¹⁾ (N = 16)
Pains or 'sensations' in head or neck	15	7	5
Weakness, tiredness	4	2	2
Eye problems	3	3	-
Dizziness	1	2	-
Feeling hot	1	3	-
Aware of heart, tightness in chest	-	-	2
No. noticing changes in BP	20	15	8
Mean no. symptoms reported	1.2	1.1	1.1

(1) Two middle class people checked their own blood pressure level with an automatic recording machine.

Table 13

CURRENT MEDICATION RECORDED IN CASE NOTES

	Working Class		Middle Class
	Afro-Caribbean (N = 30)	White (N = 30)	White (N = 16)
Diuretic only	6	2	4
Diuretic & beta blocker	12	13	5
Beta blocker only	4	9	3
Diuretic beta blocker & vasodilator/ Calcium channel antagonist	2	1	-
Alpha adrenoceptor	-	1	-
Calcium channel blockers	2	-	1
Other combinations	3	3	1
Not known	1	1	2

Table 14**MOST RECENT DIASTOLIC BLOOD PRESSURE RECORDED IN CASE NOTES**

Diastolic (mm Hg)	Working class		Middle class
	Afro-Caribbean (N = 30)	White (N = 30)	White (N = 16)
90 or under	8	15	12
90-99	6	5	2
100-104	11	6	-
105-109	-	1	-
110 & over	5	3	2

Table 15

USE OF DRUGS PRESCRIBED TO CONTROL BLOOD PRESSURE

	Afro-Caribbean (N = 30)	Working Class White (N = 30)	Middle Class White (N = 16)
Takes as prescribed	12	26	13
Often forgets	2	1	2
Takes reduced dose	2	-	-
Regularly 'leaves off'	14	1	1
Recently taken off by GP	-	2	-

Table 16**TYPES OF LIFE STYLE CHANGES MENTIONED AS THE MOST IMPORTANT WAYS OF CONTROLLING THEIR BLOOD PRESSURE**

	Working Class		Middle Class
	Afro-Caribbean (N = 30)	White (N = 30)	White (N = 30)
Rest, relax, avoid stress	17	12	5
Change diet, reduce weight	13	13	9
Reduce alcohol	3	2	-
Reduce smoking	1	3	3
(Already non-smoker)	(18)	(17)	(10)
No. identifying changes in consumption ⁽¹⁾	14	14	11

(1) Includes diet, weight, alcohol and smoking

Appendix B

PATIENTS INTERVIEWED

PATIENTS INTERVIEWED

1. Afro-Caribbean men

Study no.	Age	No. yrs in local area	Economic activity	Tenure	No. yrs since BP diagnosed	Most recent BP recorded
11	47	28	F/T	Owner	10	170/110
21	46	14	F/T	Council	5	170/100
22	47	14	F/T	Owner	3	150/95
13	40	25	F/T	Owner	4	130/90
25	52	15	Unemp.	Owner	10	140/90
27	47	17	Unemp.	Council	3	142/96
31	52	24	F/T	Council	8	150/95
45	46	14	F/T	Council	3	170/100
49	41	15	F/T	Council	8	140/100
50	44	26	F/T	Council	6	170/100
54	53	11	F/T	Owner	2	180/86
55	41	13	F/T	Council	3	150/95
59	55	21	Unemp.	Owner	4	180/110
60	53	4	Unemp.	Council	10	150/95
61	44	20	F/T	Council	2	160/100

2. Afro-Caribbean women

Study no.	Age	No. yrs in local area	Economic activity	Tenure	No. yrs since BP diagnosed	Most recent BP recorded
7	53	12	F/T	Council	1	170/104
14	40	14	F/T	Council	5	130/90
18	51	20	F/T	Owner	11	160/100
26	50	17	F/T	Owner	15	190/120
28	48	8	F/T	Council	2	135/90
29	52	22	-	Owner	10	220/135
30	51	10	P/T	Council	6	160/100
32	52	13	F/T	Council	10	170/100
34	54	25	F/T	Council	22	220/110
35	54	28	F/T	Owner	10	140/80
43	47	18	F/T	Council	24	130/90
52	52	27	F/T	Council	4	130/90
56	47	14	F/T	Council	1	140/100
57	54	4	-	Council	4	160/100
58	42	12	-	Council	20	150/90

3. White working class men

Study no.	Age	No. yrs. in local area	Economic activity	Tenure	No. yrs since BP diagnosed	Most recent BP recorded
1	51	30	F/T	Council	2	120/80
3	43	25	Unemp.	Council	2	180/86
4	49	14	F/T	Council	2	130/90
8	49	Life	F/T	Rented	13	140/86
19	49	49	F/T	Owner	3	132/86
36	44	14	F/T	Rented	1	140/100
39	40	9	F/T	Rented	4	140/90
40	51	29	Unemp.	Owner	10	160/100
41	39	Life	F/T	Council	6	146/86
42	49	16	F/T	Council	7	124/78
44	53	Life	P/T	Council	3	168/114
46	50	Life	F/T	Council	2	140/85
48	52	9	Unemp.	Council	2	150/90
53	39	14	Unemp.	Council	2	140/90
62	52	52	F/T	Council	3	165/95

4. White working class women

Study no.	Age	No. yrs. in local area	Economic activity	Tenure	No. yrs since BP diagnosed	Most recent BP recorded
2	52	Life	P/T	Council	1	160/100
5	53	5	F/T	Council	2	170/100
6	50	Life	F/T	Rented	2	160/100
9	48	9	P/T	Council	5	150/95
10	44	22	-	Council	20	160/110
12	42	19	F/T	Rented	12	160/110
15	48	22	P/T	Council	1	160/100
16	52	21	P/T	Council	10	130/90
17	49	21	P/T	Rented	5	130/80
23	54	6	-	Council	7	162/106
24	54	14	F/T	Council	20	150/95
33	44	5	P/T	Council	10	140/85
37	41	7	PT	Rented	8	140/85
38	40	Life	PT	Council	5	150/95
31	45	15	F/T	Council	2	150/95

5. White middle class

Study no.	Age	No. yrs in local area	Economic activity	Tenure	No.yrs since BP diagnosed	Most recent BP recorded
<u>Men</u>						
61	48	6	F/T	Owner	5	140/90
63	49	16	F/T	Owner	7	170/100
67	55	12	F/T	Owner	3	170/95
68	52	10	F/T	Owner	1	145/90
69	56	22	F/T	Rented	3	160/100
72	54	2	F/T	Owner	3	155/95
73	43	8	F/T	Owner	9	145/85
75	47	4	F/T	Owner	1	140/85
<u>Women</u>						
62	49	12	F/T	Owner	2	155/95
64	55	35	P/T	Owner	6	-
65	51	5	F/T	Owner	14	150/85
66	48	4	P/T	Owner	11	140/90
70	46	17	P/T	Owner	5	150/95
71	56	Life	P/T	Owner	10	145/85
74	55	12	P/T	Owner	8	140/90
76	56	25	P/T	Owner	5	-

Appendix C

GENERAL PRACTITIONERS INTERVIEWED

GENERAL PRACTITIONERS INTERVIEWED

Study no.	No. doctors in practice	Age	MBBS	MRCGP
01	1	48	Ceylon	-
02	1	54	UK	-
03	3 $\frac{1}{2}$	29	UK	-
04	1	56	Ceylon	Yes
05	3	36	UK	Yes
06	5	46	UK	Yes
07	2	47	UK	-
08	6	50	UK	Yes
09	3	62	UK	-
10	6	31	UK	Yes
11	2	48	UK	-
12	6	49	UK	Yes
13	2	51	Ceylon	-
14	1	43	Pakistan	-
15	1	60	UK	-
16	4	41	UK	-
17	3	58	UK	Yes
18	6	58	UK	Yes
19	4 $\frac{1}{2}$	50	UK	Yes
20	1	58	UK	-
21	4	61	UK	-

Appendix D

PATIENT INTERVIEW GUIDE

INTERVIEW GUIDE FOR PATIENTS

INTRODUCTION

SOCIAL CHARACTERISTICS

1. Do you have a job? Full time/part time
 Unemployed/retired/housewife

2. What type of work do you do? (last job/type of work looking for?)
Type of firm or organisation working in
What firm or organisation makes/does
What work he/she actually does (did)
Whether needed particular qualification or training to obtain job

3. Who else lives in your household?

4. Employment of spouse/partner (see no. 2)

5. Is your house/flat rented or do you and your family own it?

DIAGNOSIS OF HYPERTENSION

I would now like to talk about your high blood pressure.

Can you think back to the time when you first heard about your high blood pressure.

7. How long ago was this?

How did you come to find out about your high blood pressure?

8. Can you remember how you felt when the doctor first told you about your high blood pressure?

9. What did the doctor tell you - did he explain why you had high blood pressure?
(Have you actually asked the doctor about this?)

10. Some people use the word 'hypertension'. Do you know what that means? Is it any different from blood pressure?

CAUSES OF HYPERTENSION

11. What do you feel are the main causes of your high blood pressure?
12. You say that _____ probably caused your high blood pressure. Do you think these sorts of things are what usually cause high blood pressure or do you think that some people develop high blood pressure for other reasons?
13. What do you believe happens in your body when you have high blood pressure?

IMPACT OF HYPERTENSION

14. Some people get quite bothered about having high blood pressure.
Does it bother you?
Do you think about it often, or just sometimes?
What do you worry about?
Have you talked to your doctor about these worries?
15. Do you regard yourself as an ill person because you have high blood pressure?
16. Have you experienced any specific problems as a result of your high blood pressure?
17. Have you changed the sorts of things you do, or how much you do because of your high blood pressure?
Do you take time off work because of your blood pressure?
18. Is your family worried that you have high blood pressure? (How does this show?)
Do they treat you any differently because of your blood pressure, such as doing things for you or telling you to rest?
What was their reaction when you first came home and told them?

CONTROLLING HYPERTENSION

Perhaps we could talk now about the things you do to help your blood pressure.

19. For you personally, what do you feel is the most important thing you can do to control your blood pressure?
20. Has your general practitioner given you any tablets to help your high blood pressure?

How do you find the tablets - are they helpful?
Do they make you feel unwell in any way?

21. Do you take the tablets every day or just occasionally?
(If occasionally - when, why?)

(If everyday, do you find it difficult to remember to take the tablets?
For example, did you remember to take them everyday last week?)
22. Would you prefer to take liquid instead?
23. Do you expect to take the tablets all your life?
(Does this bother you?)
24. Do you take anything else for your high blood pressure?
(What, who suggested, how helpful?)

What about natural remedies - have you tried these sorts of things?
(What, who suggested them, how helpful were they?)
(Do you take the tablets and the remedies or just one?
Would you tell your doctor or do you think he knows that you are taking West Indian remedies?
What do you feel he would think about this?)
25. Have you consulted any other type of healers or private doctor?
26. What about smoking and drinking - have you cut down on these things because of your blood pressure?
27. Have you changed the sorts of things you eat because of your blood pressure?
28. Have you thought of trying anything like yoga or relaxation classes to help control your blood pressure?
29. Have you noticed any changes in your blood pressure - that is, times when it seems better or worse?
(How does this show itself? What do you believe is the cause? What do you do when this happens?)
30. How important do you think it is to control high blood pressure?
(What happens if it is not controlled? Do you worry about anything like this happening to you?)

HEALTH

Finally, I would like to talk a bit about health in general.

31. We often talk about people being healthy - what do you feel being 'healthy' really means?
32. Do you regard yourself as a healthy person, or not as healthy as other people of the same age?
33. Do you feel that being healthy is really a matter of luck or chance, or do you feel that people are largely responsible for their own health?
34. Are there any particular illnesses you think you might get, or worry about getting?
35. Finally, how important do you feel health is?

Appendix E

GENERAL PRACTITIONER INTERVIEW GUIDE

INTERVIEW GUIDE FOR GENERAL PRACTITIONERS

INTRODUCTION

GENERAL QUESTIONS

1. About how many patients are registered with the practice?
(And how many doctors are there?)
2. How many patients do you have?
3. Thinking about the patients you see, what is the proportion in non- manual and manual occupations?
4. About what proportion of patients belong to ethnic minorities?
(Which are the main ethnic groups? About how many of your patients are West Indians?)
5. Have you noticed any differences in the way in which patients from different ethnic backgrounds present their symptoms, or in their beliefs about illness?
6. Do you think West Indian patients differ from other groups in how they present their symptoms, or in what they think are the causes of their health problems and the treatments they expect?
7. Do you feel this sometimes acts as a barrier to providing effective care?

DIAGNOSIS

8. Thinking about diagnosis, are there any general characteristics of patients which alert you to the possibility of hypertension?
9. Are there any particular symptoms that patients present with which alert you to the possibility of hypertension?
10. What do you feel are the main causes of hypertension?
11. Do you have any ideas what your patients regard as the cause of their hypertension?

TREATMENT

12. How do you decide whether or not to put a patient on drugs for their BP?
(BP level at which usually treat).
13. What medication do you most commonly prescribe for your hypertensive patients?
14. Do you feel you have changed your approach to treating hypertension over the last few years?

WORRIES AND COMMUNICATION

15. When talking to patients do you use the word hypertension or high blood pressure?
16. Do you feel that having hypertension worries your patients?
Do they discuss any worries with you?
Do any groups seem particularly worried?
17. Do you tell patients that they are probably going to have to take tablets for their hypertension for the rest of their life?
18. Do you regard your patients as 'sick' because they have hypertension?
19. Do you feel that your patients regard themselves as 'sick' because they have hypertension?
Do you think that knowing they have hypertension changes their behaviour in any way?

PATIENTS' RESPONSES

20. In general, how well do you feel your hypertensive patients comply with their treatment and take their tablets regularly?
Do you feel there is any difference in the level of compliance among different groups of patients?
21. Why do you think patients don't take their hypertensive treatment - is it because they just forget, or for other reasons?
22. Are there any particular tablets that you feel your patients might not take?
23. Do you do anything to try and ensure that your hypertensive patients do comply with their treatment?

24. Do you make any other suggestions about things patients should do to control their hypertension?
25. Do you feel that your hypertensive patients follow your advice about reducing smoking and changing their diet? Are some groups more receptive than others?
26. Do you give any advice about exercise or rest?
27. What about relaxation therapy - do you give your hypertensive patients any advice about this?
28. Are you aware of any home remedies that your patients use for hypertension?
29. Do you know if any of your patients go to a private doctor for a second opinion about their hypertension?
30. Do people ever ask to see you as a private patient for a second opinion about their hypertension?